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DEFENCE POLICY FOR INDIA IN THE SEVENTIES

CAPTAIN PT CHOUDHARY

INTRODUCTION

THE euphoria generated by India's victory over Pakistan in the 1971 war and the reduction of the potential threat to it from that country due to the emergence of Bangla Desh, has caused a new wave of interest in India's defence policy. A great deal of discussion is raging all over the country amongst people both in uniform and out of it. Many questions have been raised. Questions such as :

- (a) Is there any military threat to India, and if there is, what is its nature and extent in the foreseeable future ?
- (b) Does this threat envisage the employment of nuclear weapons, and if yes, to what extent and what are its implications ?
- (c) How can this threat to India be countered and neutralised ?
- (d) What are the desired capabilities to be generated by the new defence policy ?
- (e) What are the necessary steps to be taken for attaining this capability ?
- (f) What are the economic considerations in adopting such a defence policy ?

Many so-called experts have expressed diverse opinions. Facts and figures and even the results of logical analysis have been distorted and many irrelevant side issues have been introduced to present a picture more corresponding to their own political, emotional or otherwise interested points of view, rather than a really objective one.

An attempt is made in this essay to discuss these questions and determine objectively the requirements which our defence policy over the next decade or so must be designed to satisfy.

IS THERE ANY MILITARY THREAT TO INDIA AND IF THERE IS WHAT IS ITS NATURE AND EXTENT IN THE FORESEEABLE FUTURE ?

THREAT TO INDIA

Since pacific habits are no guarantee against aggression by a neighbour who is not similarly minded it becomes mandatory for those who want peace to be prepared for war. Amongst all the countries neighbouring India, only two are sufficiently inimical to pose the threat of military aggression. These are China and Pakistan.

NATURE OF THREAT

The more recent postures adopted by China and to an extent by Pakistan indicate that the kind of aggression which India should be prepared to face is likely to be of the nature of subversion and guerilla action and local infringements which may or may not flare up into actual combat on any mentionable scale. Military combat may also be initiated from a desire to attain some limited objective for political or economic reasons by either side or by an attitude of constant attrition by the aggressor which appeasement does not really satisfy.

EXTENT OF THREAT

It is highly improbable that massive conventional offensive, on the scale of World War II, will be launched against India in the foreseeable future by either China or Pakistan first because that would require the country to be involved in a "last ditch" sort of stand which their recent posturing contra-indicates and secondly because of the compelling force of international psychological pressure and the many vital economic and political interests that will not permit such a situation to exist or develop.

Similar reasoning also rules out an all-out thermo nuclear offensive even if the capacity to engage in such a war existed; besides the very process of acquiring such a capacity automatically brings about some sort of maturity in the political thinking and action of the concerned nation.

Another reason why such wars are out is that it is very improbable that either India or its enemies are going to be faced with a situation where the stakes are high enough to justify taking the risk involved in such all-out war. Such stakes could only be the threat of complete loss of freedom or perhaps even total destruction, which choice none of them is likely to be confronted with.

This naturally gives rise to a situation of politico-economic warfare, subversion and local military aggression, which is now, and has been the case for the past many years.

In such a context to avoid "piece meal" surrender through appeasement, where each piece is too small to cause any real manifestation of international censure India might determine to engage in defensive or counter-offensive military actions limited in character. There have been many such limited wars in recent years, and the study of the attempts to confine such conflicts, the negotiated armistices, and the ability even to accept some adverse outcomes give a significant indication that the war of limited scale and limited objective is here to stay.

Attempts to confine such conflicts have all been based on the combatants mutually and tacitly allowing certain sorts of limitations to be imposed on them. These limitations are considered very briefly below;

GEOGRAPHICAL LIMITATIONS

Which attempts to restrict the war to within certain geographical areas. This is a precarious sort of limitation as the struggle within can, and usually will be, fed from bases outside that area which cannot be attacked. This means that superiority can only be achieved temporarily and that air or nuclear mastery cannot be achieved. Such a limitation will tend to make the war prolonged and indecisive and also it is disadvantageous to the defender as the theatre of action will generally be in his territory.

TIME LIMITATION OR DURATION

Such a limitation cannot be agreed to by the opposing forces prior to the start of action for obvious reasons. This imposes itself upon them regardless of their individual desires or needs. Pressure of international opinion could cause it. The defender repulsing the attacker, or the aggressor refusing to extend himself further once having attained his limited objective, would each cause the war to be limited to the time taken to achieve either of these states by any of the forces.

The duration of the war plays an important part in the psychological strategy as the weaker side might decide to play upon the weariness of the enemy and thus strive to prevent any quick solution.

FORCE OR WEAPON LIMITATION

To accept such a limitation, even tacitly, is being very shortsighted, because never in human history has there been an instance when a force driven to its last legs has hesitated from using any or all of its weapons however destructive *as long as he thinks he can get away with it*. This is one of the important reasons why a nation cannot afford to lag behind its potential enemies in military technology and research. Because any country that does so, no matter how large its military budget or how efficiently it allocates its resources, is likely to be at the mercy of a more progressive enemy.

TARGET LIMITATION

Which means mutual withholding from attacking certain types of targets or areas. Such a limitation is meaningless unless it be in the case of a purely conventional action and even then it is rather difficult to observe, because modern weapons, even some conventional ones, have a lethal radius greater than the distances separating many a "strictly military" target from large civilian population centres.

Now any of these limitations by itself is not very practicable or probable. What may be expected is a combination of two or more of them as and how circumstances dictate, as no limitation however reasonable can be acceptable to the defender which puts him at a disadvantage in relation to the enemy.

DOES THIS THREAT ENVISAGE THE EMPLOYMENT OF NUCLEAR WEAPONS AND IF YES TO WHAT EXTENT AND WHAT ARE THEIR IMPLICATIONS ?

ENEMY'S NUCLEAR CAPABILITIES

- (i) *China* : Will have a stable nuclear force once the ICBM's it is now testing, are fully developed. U.S. Pentagon sources estimate that China has at least 100 MRBS's (range 1000 miles) ready for firing with at least 20 KT warheads. By the 1980's China is also likely to possess a sizeable tactical nuclear arsenal.
- (ii) *Pakistan* : Does possess some quantity of fissile material and is attempting to set up a nuclear reactor soon. This country is definitely not capable of becoming a large enough nuclear power at strategic level in the foreseeable future. However it seems quite likely that it may acquire and to a small extent even manufacture tactical nuclear weapons by the 1980's, though the latter possibility seems rather remote.

THREAT OF EMPLOYMENT OF NUCLEAR WEAPONS

- (i) *Strategic level* : A strategic nuclear force is one which is used for massive atomic strikes against pre-selected sites of enemy or enemy-held territory. ICBM's and IRBM's come within this category of weapons.
- (a) However, as has been brought out earlier the likelihood of all-out thermonuclear war using such weapons is so small as to be practically negligible. Yet it is not to be denied that the possession of such a force by the enemy does give them a political, military and psychological advantage unless the other side also possesses them.
- (b) *Tactical level* : A tactical nuclear weapon is firstly a weapon that is either absolutely "clean" or having a very short half-life radioactivity, and secondly one which is used from within the area of conflict itself. This, given today's technology and rate of progress, automatically restricts the yield of the weapon to a certain maximum which is equally imposing on both sides, especially if there exists an economic, resources and technological parity between them. However, it is not so much their yield as their purpose which differentiates them from strategic weapons. Tactical nuclear weapons are those used in field operations and sea warfare to facilitate the objectives of a land army or naval armada. The threat of employment of such weapons will constantly exist from the date that either China or Pakistan possesses a sizeable arsenal of them. Which, as has been brought out earlier, is likely to be within a few years.
- (i) Since such weapons could be called but a better sort of conventional weapons not much dependence can be given to moral attitudes or international opinion to prevent their use completely, especially at sea or in sparsely populated or desolate land areas which is the case along much of India's northern borders.

(c) *Implications of Nuclear Factors*

- (i) Since military tactics are a function of the weapons being used, the possibility that the enemy might use the tactical nuclear weapons he possesses, or will soon possess, against India indicates certain desirable lines of development of own tactics and imposes upon India's armed forces the necessity to take more or less permanent anti-nuclear security measures. Even though it is envisaged that such weapons will be used only sparingly to intervene decisively at suitable moments in an otherwise conventional action.
- (ii) Nuclear warfare emphasizes dispersion and mobility. The greater the level of nuclear conflict, within the tactical limits, the more important these become. Dispersion ; so as not to present the enemy with a worthwhile target to use his weapons on, and Mobility ; so as to enable the required concentration of force to be brought about at any given point to achieve a particular objective and then disperse again before the enemy can suitably react to the concentration. This obviously also has to be matched by an equally competent system of communications. Also, the prospect of achieving the objective by a concentration of force should visualize greater fire-power per man as an essential requirement, and here Tac-N weapons become invaluable, in an attempt to compensate for the smaller number deployed in a given area.
- (iii) Such a threat also calls for other protective measures to be taken for all logistic installations such as going underground, better camouflage and so on, as it will not always be sufficient or practicable to rely purely on dispersion and mobility for such installations. Also many logistic targets would have to be at greater distances from the front.
- (iv) Fixed lines of defence, concentrations of men or weapons as called for by conventional weapons and tactics, cannot be resorted to as they offer a tempting target for Tac-N weapons.
- (v) Nuclear weapons, if used, might have the following effects :—
 - (a) Sudden heavy casualties to the units hit unless they are fully prepared. Such sudden high losses in turn create great fluctuations in evacuation and medical support needs and in replacement requirements.
 - (b) Destruction or major disruption of line of communications thus making surface movement more difficult.
- (vi) Highly sophisticated and intensive surveillance measures to locate the enemy will need to be employed, and equally intensive counter surveillance measures.

**HOW CAN THE MILITARY THREAT TO INDIA
BE COUNTERED AND NEUTRALISED ?**

- (a) The military threat to India can only be neutralised when its defence effort is so designed as to provide fully the necessary military capability required for the maintenance of complete security of its borders

from any sort of physical aggression. This can be attained only by maintaining an adequate defence establishment of such a nature as to deny the enemy any hope of political or economic advantage. Hence the enemy can be deterred from committing aggression only when he realises that his gains are not worth the risks he has to take, that is when he is made cautious by the counter-offensive capability of the other side.

(b) There is considerable opinion today that India should content itself with having enough force to deter Pakistan from any future military "adventurism" and leave the question of neutralization of the Chinese threat to international action or to some other nation such as the U.S.S.R. or the U.S.A.

(c) From the point of view of national security this is a very poor option, comparable to the "head in the sand" attitude of the ostrich when being faced with an undesirable situation. The security of the nation cannot and must not be left to the mercy of the self-interests of other nations.

(d) In any event such an attitude seems to be born more of a pessimistic outlook than from any strength of principle or any "inside" knowledge. Because an understanding of the existing situation with regard to the parity of forces would leave no room for such an attitude of doubt.

(e) China today has a total armed forces strength of about 2.5 million, reasonably well-equipped with infantry weapons, but somewhat lacking in very heavy artillery and armour which in any case cannot be easily deployed against India due to the terrain across which its forces would have to operate. Various estimates have been made of the number of troops China would be able to deploy across the terrain that forms the Indo-Tibetan border, the best of which place this number at not more than 2 lakh men, though if China disregarded other international boundaries it could bring to bear greater numbers against India through common neighbouring countries such as Burma.

(f) Its technological and industrial know-how is still somewhat of the same order as India's, with no advantage that cannot be nullified by India if she sets out to do so before too long.

(g) As for Pakistan, an estimate of the number of its men under arms would place the figure at about 2.5 lakhs.

(h) The 1971 and 1965 operations against Pakistan have served to give India a fairly accurate picture of the military might and capability that it possesses. However, a continuous survey of that nation's policies and procurement plans and developments in the military sphere must be maintained so as not to allow it to ever attain such a commanding position in relation to India that it would once again reasonably contemplate aggression.

(j) The deterrent to this threat must be a comprehensive one, offered at different levels. These are :

(a) NUCLEAR LEVEL

(i) *Strategic Level* : China, as has been brought out earlier, will soon possess a stable strategic nuclear force. However, for reasons

given earlier, it is not likely to launch any all-out attack on India with these weapons. Yet the possession of such weapons does give China a political, military and psychological advantage over India which India would do well to counter.

This can be done either by going in for a nuclear umbrella of some Big Power, or by opting for a stable strategic nuclear force for itself, or by a combination of both in an attempt to find a suitable compromise. The decision arrived at should be an optimum one, that is, a decision by which the country can gain the maximum military advantage with the least loss of political independence and at a minimal economic cost.

If for reasons of more effective national security, it is decided to develop such a nuclear weapon system within the country, the guideline should be to aim at such a level of nuclear force that will deter the enemy from ever launching an attack at such a level and also make meaningless his threat to ever do so, thus negating completely the value of such weapons in his possession.

However, it must be realized that no single system can be considered as being the only solution and hence it becomes essential to select from among the various possible systems and methods those best fitted to the case concerned.

A purely strategic level deterrent would leave the country vulnerable to "nibbling" action by the enemy, for such weapons cannot be used to retaliate for every small thrust of the enemy. With the initiative thus surrendered to the enemy the country would be forced to choose, with every incident, between appeasement and catastrophe. It thus becomes necessary to have a deterrence at the tactical nuclear level also.

(ii) *Tactical Level* : Deterrence at the tactical nuclear level can only be offered by India if it possesses at least a credible tactical nuclear force itself and has also adopted own tactics to accept such a capability from the enemy too.

Any country that can produce weapons grade fissionable material (as India does at Trombay from its own thorium resources) can easily acquire such a credible force limited only by the amount of fissionable material it can produce.

Several characteristics of such weapons have become fairly clear and their implications may be summarized as follows: (quotations are from "The Economics of Defence in the Nuclear Age" by Charles J. Hitch and Roland N. McKean).

- (aa) "That tactical forces armed with even moderate numbers of nuclear weapons and the means of delivering them can easily and quickly defeat forces which do not possess them."
- (bb) "That ground, naval or tactical air forces that have not adapted

their deployment and tactics to the new weapons will be hopelessly vulnerable to nuclear attack."

- (cc) Such weapons give an attacker the ability to compress a devastating attack in space and time, thus giving him an inherent advantage over the defender. However it is also difficult for the attacker to ensure against effective counter-attack.

Thus it becomes apparent that it is essential for India to possess nuclear weapons and the ability to react offensively at the counter-force level besides suitably evolving its tactics and strategy to accept the threat of such warfare.

(b) NON-NUCLEAR LEVEL

Assuming that in the foreseeable future India's policies will be mainly defence-oriented, the purpose of its defence policy would be to prevent war.

The best deterrent to conventional war is the capacity to dominate by force any situation involving offensive action by the enemy. This is justification enough for maintaining a highly mobile and adequately powerful standing army.

Again, the introduction of Tac-N weapons into warfare at the conventional level promises to be quite effective in stabilizing the military situation at that level.

WHAT ARE THE DESIRED CAPABILITIES TO BE GENERATED BY THE NEW DEFENCE POLICY ?

The defence policy of a nation must conform to the politico-economic circumstances as existing in the nation because strategic requirements must only recommend policies and not dictate them as is implicit in the definition of war as only an extension of diplomacy by other means.

Also this policy should be spelt out in sufficiently broad terms and on such a basis as to enable it to undergo a constant process of adaptation as might become necessary in subsequent years, without its foundations being affected.

This is because the policy would be derived from a military analysis of the best way to fight a war or prepare to fight a war which is dependent on decisions which are effected decisively by decisions made or to be made in the future in the enemy's camp, and a certain amount of error in such predictions must always be provided for. Of course such predictions are not to be made lightly but after a close and objective study of the calibre of troops, his strength to be opposed, his capabilities, trends of development and research in his country, his psychology and habits, the tactics and

strategy previously adopted by him and the terrain to be fought over, and after attributing reasonably some strategies to him without exaggerating or under estimating his abilities in any way.

Such a study would enable a realistic estimate to be made of the enemy's capabilities and of the value of any change that may seem desirable in our policies. Because in the ultimate analysis the value of a military tactic, strategy, force or development programme can only be expressed in comparative terms with respect to the tactics, strategy, forces and future weapon systems of the enemy, or potential enemy and not in any qualitative fashion by themselves.

The task that India's Armed forces will have to take up is to bring about as quickly as possible the collapse of the enemy's offensive and make it impossible for him to continue operations. For this a great deal of change in organization, tactics and equipment will have to be made.

However since it is no light affair to attempt even in moderate degree to change the present set-up, no change should be made for the sake of change alone, but only when clearly and beyond question it introduces something of added benefit.

WHAT ARE THE STEPS NECESSARY TO BE TAKEN FOR THE IMPLEMENTATION OF THE NEW DEFENCE POLICY ?

Speed is the key factor in any campaign, because the longer it lasts the greater the pressure brought to bear on the combatants by international opinion to bring about a cease-fire. When that does take place it is desirable that India be in a position of strength at the inevitable conference table. This emphasizes the need for an offensive capability that can be utilized at short notice.

Not only time but space is also at a premium for India on its own side of the border, because all along most of its borders there is insufficient depth to enable its forces to fall back and thus gain time enough to react properly to the enemy offensive. Hence the necessity of offensive capability to carry the battle into the enemy's territory and thus get enough space to operate in.

A conventional offensive ability, visualizing as it does a frontal assault, is not really what India should aim at possessing. Such an ability does not really do the enemy sufficient damage and besides the accompanying loss of life is terrible. What is needed is the ability to really hit the enemy where it would hurt the most, that is by cutting off his lines of supply, by capturing or destroying as much of his weapons and equipment as possible and not by placing any unnecessary emphasis on inflicting casualties.

Besides such an offensive capability and the minimum of conventional defensive ability required to back up the offensive and gain sufficient

time for it to operate, India must also possess an ability to tackle or even prevent altogether any outbreak of subversive warfare or infiltration or any guerilla warfare. Such a capability is not only essential but also it is this which would mostly be required to be utilized judging from what is known of China's and Pakistan's actions in the past.

India's Armed Forces could attain such capabilities if a suitable defence policy was implemented over the next decade or so. Such an implementation would include the following actions.

(a) CREATION OF A SUITABLE BORDER ZONE AND THE ESTABLISHMENT OF PROPERLY ORGANIZED BORDER POLICE WITHIN THEM

All along the sensitive border stretches a zone of reasonable depth (which will naturally vary with the type of terrain and the level of development of the area) must be declared a border zone, movement within which is restricted. A suitably organized Border Police force must be established on a permanent basis within these areas. The tasks of this police force would be :

- (i) To obtain a thorough familiarity with the terrain, not only to enable them to be one up on any guerilla activities but also to be able to provide information and intelligence that may be required by the regular army.
- (ii) To keep a close watch on the movements of the population in that zone, so as to weed out any suspect element and also to make it difficult for any infiltration to take place.
- (iii) To establish proper civil defence measures and carry out civil defence practices.

Proper resettlement programmes in which ex-servicemen and such like loyal and hardy folk are encouraged to establish themselves within these zones by giving them sufficient inducements and the removal of all suspect people from within that region if needed by paying them compensation, would make it difficult for any guerilla or subversive activity or infiltration to take place.

The establishment of an effective and dependable system of ground and radio communication within these areas would also serve to facilitate rapid movement of troops and supplies and would also reduce delay in communication of intelligence data.

RE-ORGANIZATION OF THE ARMY INTO A MORE SUITABLE FRAME-WORK TO ENABLE IT CARRY OUT ITS FUNCTIONS AS VISUALIZED EARLIER

Knowing the forces that Pakistan can deploy against India and also that small fraction of its total forces that China, due to its other liabilities and the logistical problems involved in supporting a force in Tibet, can bring to bear against India a reasonable estimate of the size of the standing Army India requires can be made.

As Mr PVR Rao in his book "Defence without Drift" puts it, "The standing army should be adequate in size to take the immediate impact of any enemy onslaught and to provide the necessary framework for the expansion of the forces consequent on the outbreak of war. Thus, the first criterion in determining the size of the standing army is the strength of the enemy forces likely to be ranged against it at the commencement of war, the second, the relative rapidity with which either side can replace wastages inherent in war and bring in reinforcements. To maintain a larger standing army is to forget its purpose".

The infrastructure required for a comprehensive and elastic defence plan should be developed covering troop deployments and mobilizations and construction of suitable fortifications wherever necessary to support the operational plans. Such fortifications should be the bare minimum required for the better deployment of the Army and to provide protection to highly vulnerable areas close to the border from the initial onslaught of the enemy. To go in for fortifications for any other purpose is not only wasteful financially and manpower-wise but also leads to a loss of flexibility of employment of the troops.

To be really effective in the context of future wars, which are likely to be on the lines earlier discussed, the troop deployments of the Army would have to be based on a somewhat different organization than exists today.

Small, highly mobile combat teams (visualized at about company strength, though their size should be carefully determined after proper study to be just enough for carrying out their tasks. Perhaps on, an all-arm basis would be more desirable) each self-contained and designed to operate pretty independently would perhaps be the best answer to such conditions.

In defence and offence such combat teams, operating from widely dispersed and well-concealed bases, and, which refuse to hold any piece of ground as sacred and yet which force the enemy to pay dearly for all the ground he takes, and which can combine to achieve the required concentration to attain an objective and then again disperse, would be most effective.

In defence the teams must be so concealed, protected and dispersed that the overall framework can absorb a nuclear attack without disintegrating. In the offensive role they should be capable of making rapid penetration deep into enemy territory and carry out tough missions with or without outside aid.

Naturally it is a must that they pack the maximum "punch" for their size, for which they must be made capable of employing small nuclear weapons and of calling for and getting with the least delay non-nuclear

systematic process exists for doing so. Suitably trained reserves for shore-based establishments must also be formed. Indian merchant naval ships, especially those constructed within India, should be designed in such a fashion as to permit speedy conversion to such naval roles as not requiring much offensive capability, such as coastal duties, etc. A well coordinated and comprehensive coastal patrol needs to be established, which during peace time could be under the customs authorities and regular naval personnel could be seconded to it to enable them to gain a thorough knowledge of the coastal waters. This patrol organisation could be designed to come under Naval command on the start of hostilities.

As has been mentioned earlier also, the Navy must establish its presence more firmly in India's island possessions. The Naval air arm must establish itself on airfields amongst the islands wherever possible as an alternative, if Air Force units are employed these should be placed under the command of the Naval Commander wherever the naval role dominates.

The land forces designated to man and protect the various island groups must take part in amphibious exercises with the Navy so as to enable them to eject any hostile force. To enable this to be done, proper patrolling of the various islands needs to be done.

The opening up of more and faster communication links with the mainland and the establishment of more effective civil administration set-up coupled with better facilities for Armed Forces personnel to stay, with inducements for them to bring their families there, will all help enormously in denying those islands to the enemy and in extending the operational reach of the Navy, as well as the Air Force.

(d) REQUIRED POLICY IMPLEMENTATION IN THE AIR FORCE

It is not reasonable or rational to expect India to be able to manufacture wholly indigenously ultra modern aircraft in the next few years. The process of modernisation, improvements in technology and the costs of development of aircraft being such as they are, even advanced countries, such as France, U.K. and Germany are preferring to produce military aircraft in a combined effort. Hence for the present decade or so India should limit itself to procuring the best it can and maintaining them in the air. Some sort of foreign collaboration in the manufacture of some types of aircraft and various types of ancillary supplies which are deemed essential could be encouraged if thought necessary. A comparative cost and effect analysis of a procurement programme with a manufacturing programme for a reasonable time period, say 10 years or so, would help in deciding whether to buy an item or manufacture it.

Some sort of standardization must be aimed at so as to reduce the immense variety of spares required and make it easier to provision for them adequately. Proper workshop and testing facilities and more rapid maintenance procedures must be created and evolved.

Since aircraft will always be in short supply the use of flight simulators to compensate for some flying experience in training and conversion flights would be very advantageous, to say the least.

A number of airfields suitably located and dispersed all along the borders, suitably guarded during peace time to prevent the enemy damaging them or using them, perhaps by the militia/territorial army personnel of that zone; would provide greater range and flexibility of operation for the Air Force, besides facilitating easy movement of troops and supplies. Such airfields could also serve as bases for air mechanized combat teams of the Army. Fast flying planes capable of deep penetration into, and bombing of, enemy territory must be procured for the Air Force, as the length of the enemy lines of supply make him vulnerable in depth areas to such action.

Also a system of early warning based on radar must be established all along India's northern borders, on the top of the various mountains with suitable protection provided for such installations. This is essential to enable the Air force to best utilize its air time and suitably meet any threat of violation of India's air space.

Since for proper exercise of command the elements of fire and manoeuvre must both be under the direction of a single Commander, it is suggested that either those elements of the Air Force employed on a close ground support role be placed directly under the commander of the land forces at a reasonably high level, say a Corps, or an Army air Corps be created for this purpose.

The present system of asking for support is not only very complicated but also not quick enough. Inter-service rivalry or personal ambitions should not be allowed to stand in the way of successful implementation of defence policy.

(e) DEVELOPMENT PROGRAMME OF WEAPONS AND EQUIPMENT

Selection of new equipment and weapons or the development thereof must not be a haphazard affair but instead it should be prefaced by Systems analysis and Operational research to determine the best items or way of producing those items. Continually changing the target levels in an effort to incorporate each technological development as it occurs is not only delay-producing and uneconomical, is also self-defeating. Since we are at present not really capable of indigenously manufacturing complex weapon systems we should go in for a properly planned system of collaboration with foreign manufacturers to develop such a capacity.

In deciding about a weapons system (or equipment for that matter) it is necessary to consider its reliability, quality, cost of manufacture of the weapons system itself as well as cost of manufacture of its auxiliary equipment, ground handling and support equipment, its effectiveness, its useful life and the cost of training personnel to use it and of operating it for some appropriate period of time.

All new equipment or weapon systems must fit into the overall system already existing and while procuring them care must be taken to ensure that sufficient spares will be available for the duration of its life to enable it to be maintained properly.

To enable India to really have a developed modern weapons systems by the 1980's it might be necessary for it to skip a generation of weapons and concentrate its resources on the next step of advanced weapons. This will also substantially reduce the military budget. However the attendant risk, which might be well worth taking, is that for the duration of the development India will be left with no improvements in its weapons/equipment which would be becoming obsolescent.

However such rapid development is essential, for no degree of quantitative superiority of one type of weapons, in some cases, can compensate for inferiority in crucial weapon characteristics. For example any number of semi-automatic rifles and hand grenades look definitely puny compared to an arsenal of IRBM's with 20 KT warheads, which China possesses today.

In the development of equipment and electronic hardware the private sector could be encouraged to play a decisive role, especially where the capacity to manufacture such equipment can also be easily utilised for other civilian purposes.

WHAT ARE THE ECONOMIC CONSIDERATIONS IN ADOPTING SUCH A DEFENCE POLICY ?

(a) NECESSITY FOR DEFENCE EXPENDITURE

"To defend the universally accepted principle of constitutional Government, to enjoy those personal privileges and civil liberties which these principles afford us, one has to be willing to make an effort. To suffer hardship if necessary. You cannot become wealthy by honest means without sweating heavily. To take chances with our defence is to take chances of losing that which is more precious than life itself; the principle of democracy and justice, and the honour and destiny of our country"—from "Reminiscences" by General MacArthur, who also said the words below when speaking against a budget reduction for defence allocation.

"There is nothing more expensive than an insufficient army. To build an Army to be defeated by some other Army is sheer folly, a complete waste of money. If you are defeated by some other Army you will pay a billion dollars for every million you save on inadequate preparation. There is no such thing in war any more as glorious defeat. If you lose you will not only pay in money but you will be a slave in every other way. You will lose that nebulous thing—liberty—which is the very essence of all which we have stood for ever since George Washington and his followers made us what we are. If we had in the treasury of the United States only sufficient money to preserve our integrity against foreign aggression, that is the first use that should be made of it",

Any nation that would keep its self respect must be prepared to defend itself. The Government's expenditure for military needs is a form of national insurance and the premium must be paid to correspond with the needs of the country in peace or war.

(b) HOW MUCH SHOULD BE SPENT ?

China is now estimated to be spending about 10% of its Gross National Product on defence, against India's 3.33% to 4%. To establish a nuclear programme and also gear up its defence forces, India would have to divert approximately another 2 to 2½% of its G.N.P. to Defence. Its expenditure on defence then would be about 6% of its G.N.P. which proportion will still be small as compared with the expenditure on defence of many other countries who are not exposed to the same grave risks as India is.

(c) "SPILL-OVER" BENEFITS

It is not commonly recognized that defence programmes produce a number of indirect gains, with a number of spill-over benefits to the private sector of the economy.

"The construction and maintenance of certain facilities—such as highways that are built for defence purposes or sea or air navigational aids—help the transportation industry to cut costs or provide improved services. The benefits discussed here are "technological" not "pecuniary" spill-overs. That is, the benefits improve private firms' physical production possibilities, enabling them to get greater outputs from given inputs (or to achieve a given output with less input).

"In contrast, the purchase of uniforms bestows a 'pecuniary' gain on the textile industry, but it represents merely a shift of demand and profits from other industries (from whom the tax-payers would otherwise have bought goods).

"Besides sponsoring education and training, the Defence Services give a fillip to investment in education in still another way. The increased need for scientists, engineers, electronic experts and skilled technicians, stemming both from military operations and military research and development, is causing an extra investment in scientific skills. The investment will prove to be a profitable one from the standpoint of the whole economy.

"This is not to say that the provision of such training by the military services is an optimal policy. It would probably be more efficient for the economy as a whole and less expensive to the Defence Department if the services hired men who were already partially trained, much as they now hire doctors and dentists who are already trained. But given the present recruitment and training policies, we should recognize the spill-over benefits that accrue outside the Defence Department." (from "The Economics of Defence in the Nuclear Age." By C. J. Hitch and R.N. Mc Kean).

A well-conceived research and development programme pays off in two ways: better technology on one hand which can be suitably incorpora-

ted into operational hardware and deployed for use, and a bigger resources base on the other. The spill-over benefits also come in the fields of communications, electronic gadgetry, sophisticated appliances, metallurgy, atomic research, rocketry, plastic industry, medicine and so on. The "avalanche" effect of the development of the requisite knowhow for defence needs on other fields of enterprise is unbelievably effective in increasing their productivity and boosting the economy as a whole.

If all these benefits are converted into terms of financial gain and then deducted from the so-called defence expenditure only then would a true picture of defence expenditure be available.

To maintain high standard within the Army a high degree of training is a must. To attempt to save either time or money from training is dangerous for it leads to an inefficient Army which is worse than having no Army at all. It is better to have a small number of efficiently trained and suitably equipped men than mere numbers.

CONCLUSION

Knowing when to make a decision may be as important as knowing what decisions to make. The costs and dangers of "indecisiveness", of postponing decisions, are obvious and widely appreciated. But there are also costs and dangers in making decisions on the basis of incomplete and uncertain information. As such it is essential that not only a close study of all the factors involved be done before reaching any decision but also that this should be done as soon as possible.

Adequate military preparedness is a must. The Survival of the nation would depend on the measures taken at this time, not when there is a threat of invasion of our borders, for limited war places a premium on forces and resources in being, or those which can be mobilized at very short notice.

An attempt has been made in this essay to systematically arrive at the requirements.

PAKISTAN'S HIGHER DEFENCE ORGANISATION

COLONEL R RAMA RAO (RETD.)

PAKISTAN'S Prime Minister Mr. Z.A. Bhutto has brought about a number of changes in the higher echelons of his country's defence apparatus recently. Some of these constitute changes of a fundamental character.

Brought about in order to remedy the defects that came to light during the 1971 operations, they have far reaching political as well as military implications for that country. By their very nature they ought to be of interest to us also, although, regretfully, very little notice has been taken in this country of what obviously represents the crystallisation of a major change in the power structure and the institution of higher defence decision making machinery in the Pakistan of today, which mirrors the political changes that have come about in that country.

War, we have to remind ourselves, is continuation of policy by other means. Hence, overall decisions pertaining to war and peace and indeed the selection of major strategic objectives, as well as planning for war at the national level, are and have to be essentially political decisions, but such decisions have to be based on accurate and up to date information pertaining to a number of areas, political, economic, strategic and technological; of unbiased analyses of developments across one's borders and above all on integrated professional appraisal of courses open under sets of circumstances envisaged and their associated probable costs and benefits. Based on these appraisals, the armed services would develop contingency plans to deal with the situations envisaged, regularly review the plans in the light of new developments that may occur or be expected and update plans as necessary. This process though easy enough to define in principle is by no means that easy to implement in practice, unless a country evolves an organisational structure and creates machinery for the collection of intelligence, its dissemination to all those concerned on the basis of "need to know", for the objective analyses of intelligence covering political, strategic, economic, and other relevant areas and the evolution of contingency plans based thereon. Such contingency plans projecting military responses, would impliedly, take into account and be based on projected political and diplomatic action. Military and diplomatic plans would need to be realistic and supplement and reinforce each other.

The reorganisation of its national security and higher defence organisation brought into force recently in Pakistan would seem to be intended to secure the objectives outlined above.

It is in the light of these considerations that a brief discussion on the organisational system that obtained in Pakistan until Mr. Bhutto's accession to power, the weaknesses that were revealed from time to time during the period from the creation of that country in 1947 until 1971 the changes now brought into force, is of relevance.

II

THE POSITION AS IT OBTAINED UNTIL 1971

At the time of its emergence as a nation, Pakistan inherited roughly a third of the armed forces of undivided India in terms of personnel and equipment, besides all the training establishments and infrastructural and support facilities then existing and located geographically in what became Pakistan. The organisational structure of the armed forces was based on that obtaining in undivided India immediately preceding Partition and hence was basically similar to that prevailing here in the early days of our independence.

As in India, the army in Pakistan was the principal constituent of the armed forces, possibly more so. This imbalance by itself would have been sufficient to enable Pakistan's army to assume a predominant role in the country's affairs - especially in its defence sector. Pakistan's ill advised incursion into Kashmir in 1947-48 propped up the army further. Even so, the Army as well as the other two services would have remained a political and useful instruments of the Government of the day, had not the dominating personality of Mr. Jinnah been removed from the scene shortly after Independence and had not Mr. Liaquat Ali Khan been assassinated fairly soon thereafter. The succession of changes in political leadership that followed, undermined the confidence of the services—civil and military—in politicians of the day and generally in political processes that had become the norm in Pakistan. Pakistan's army at the time had a forceful personality in Field Marshal Ayub Khan, who as recounted by him* had been studying the political situation in Pakistan as it was evolving and was preparing himself for assuming power, at least since 1954. The death of Mr. Ghulam Mohamed and assumption of office by Gen. Sikandar Mirza gave the Field Marshal the opportunity to bring about what he chose to call "a revolution" in Pakistan and institute a near dictatorial form of Government utilising the Army to take over the entire administration of the country. By all accounts, the Field Marshal administered the country efficiently during the first few years of his regime. Thereafter, not surprisingly, army officers-at all levels-succumbed to the temptations of office,

*"Friends, Not Masters" by Field Marshal Ayub Khan.

privilege and power and in time proved that they were not much better than the politicians whom they had replaced. In addition, by politicalising the armed services, Pakistan's officer corps did the country some positive harm. Even so, the system including its architect, Field Marshal Ayub, would have survived, had he not miscalculated, overcome his customary caution and launched first an attack on a limited scale in Kutch intended as a pilot operation and subsequently an all out attack in Jammu and Kashmir in 1965. The reverse suffered by Pakistan's forces triggered a series of events leading to the Field Marshal's abdication of power and the rise of Gen. Yahya Khan. But the system still survived—at least precariously. All would have been well had the ill-fated Gen. Yahya Khan been true to his word, given effect to the verdict of the electorate in 1970-71 and conceded a measure of internal autonomy to East Pakistan as it then was. The reign of terror that he authorised Gen. Tikka Khan to unleash in Bangladesh predictably ruined discipline in his army, dehumanised Pakistani soldiers, and inexorably led to Pakistan's attack on India and Bangladesh's emergence as a free nation.

It must be conceded that some at least of West Pakistan's politicians—amongst them, Mr. Bhutto himself—had lent support to Yahya Khan's operation in Bangladesh. In fact it would not be unfair to suggest that had Mr. Bhutto and his party agreed to concede autonomy to the Provinces, the tragedy of 1971 might have been averted and Pakistan would perhaps have remained in tact.

Mr. Bhutto, extremely astute politician and observer of national and international affairs that he is, has noted the many lessons that Pakistan's recent history has thrown up. The more significant among them both political and military may be recounted, since they have relevance not only for Pakistan but to others as well.

First, armed forces if permitted to exercise decision making responsibilities in political as well as purely military matters, however competent and dedicated individual members of the forces may be, the country may find itself willy nilly dragged into adventures whose outcome, at best, may be uncertain.

Second, when armed forces get accustomed to exercise powers that in a modern state are normally the prerogatives of elected representatives of the people who in the ultimate analysis are answerable to them, armed forces would acquire a vested interest in the continuation of the system, shutting off the safety valves provided by popular institutions where people may debate and help deciding matters affecting their lives. Further, in a system where officers of armed forces constitute the principal sources of supply of higher political and administrative personnel, they would have less interest in purely professional matters and in time become professionally less competent.

Third, decisions on the acquisition of weapons and equipment, and the organisational set up of armed forces would be taken not so much on the basis of objective assessments of the defence needs of the country but possibly to ensure the continuance of the dominance of the armed forces or even of that Service and individuals of the Armed forces who may happen to be dominant at the time. This would undoubtedly have repercussions not only on the operational effectiveness of the forces but also on national economy.

Fourth, as a result of this, the political alignments of the State would be influenced by arms suppliers and in a crisis, the country may have relatively little room for manoeuvre.

Fifth, generals, admirals and air marshals come from the same stock as politicians. While the latter endeavour to capture or retain power by political methods and within some sort of a legal framework, the former would be prone to capture or retain power by coups d'etat. A country may find it difficult to shake off the habit of staging coups to secure a change of government, once such a habit is formed.

Sixth, Pakistan's armed forces were dominated by the army, for historical reasons. Although Field Marshal Ayub Khan and his successor may have liked to expand and modernise their naval and air forces there were limits beyond which they could not go, since force levels and equipment structures were primarily determined by Pakistan's principal benefactors at that time. Further, according to their plans—which certainly appear to have had the endorsement of their external advisers—Pakistani commanders worked on the premise that considering India's military equipment, force strength and defence commitments over an extensive area and above all India's tradition of not initiating an attack under any circumstances, they (Pakistanis) could concentrate their attacks at chosen points and quickly secure limited territorial gains, utilise international forums to freeze the situation and talk to India from a position of strength in order to attain their political objectives.

Thus although the organisational structure with the army's preponderance was not without logic, the fact remained that the armed forces were unbalanced and Navy and Air Force personnel felt, with justice, that they were very junior partners. This must have had its effect on inter service relations, morale of the forces and ultimately on the conduct of war.

Seventh, because of imbalance within the forces, contingency plans possibly tended to be built around one service rather than on overall needs, capabilities and limitations. Naval and Air Forces may have found it difficult to provide full support at critical points at the required times. Above all, in war, in order to attain chosen goals, it may on occasion be necessary to expose members of one service to enemy attacks, rather more than either of the others. Under such circumstances a single and commonly

accepted authority alone would be able to take responsibility for pursuing a particular course of action after weighing all issues and hearing the view points of individual services.

In the 1965 operations, Pakistan's plans hinged on successful infiltration of sizeable bodies of troops into Kashmir, sabotaging our defence and so isolating our forces in J. & K. seizing key administrative points, and inciting local population to rise in revolt against the State and Central Governments, when Pakistan's main forces would move in and administer the coup de grace. Hence the Navy really had no role, especially as the Army had hoped to clinch the issue in a very short time. The Air Force perhaps had orders to stand by and provide some form of close support to the Army besides keeping our air forces off their skies.

But the entire plan, as events turned out, was based on wrong assessments, namely that the infiltration plan would be accomplished in secrecy and achieve a stunning surprise ; that the infiltrators would succeed in their tasks of destroying our vital installations, isolating our forces and in inducing the local population to rise in revolt and demand integration with Pakistan and above all that Indian forces would collapse under determined Pakistani manoeuvres. Hence the entire operation being based on inaccurate information, as well as faulty appreciation of the strength and determination with which our political leadership as well as our armed forces would resist Pakistan's aggression had built in weaknesses with results that became evident very soon.

Again in 1971, General Yahya Khan and his advisers—mostly all military men—wrongly assessed the possible reactions of the average Bangladesh to Pakistan's brutalities, as well as grossly under estimated India's determination to defend our borders against all forms of aggression. In the actual conduct of war, the shortcomings were military but the overall decision to wage war was essentially a political decision which in view of the prevailing time and space factors put a good part of Pakistan's forces in a very difficult situation and paved the way for their eventual total defeat.

But political as well as military decisions were taken by army leaders who therefore were deservedly blamed for the disasters that followed.

III

THE NEW HIGHER DEFENCE ORGANISATION

Mr. Bhutto did not introduce radical changes in the organisation immediately on assuming power. He realised that the nation had to be nursed back to self-confidence ; that armed forces morale was badly shaken and nothing precipitate should be done to further dampen their morale. The country was bitterly divided. Popular leaders in the minority provinces felt that Mr. Bhutto was as much responsible for the

1971 tragedy as the illfated General Yahya Khan and his courtiers. Above all, they realised that in order to ensure that the people of Pakistan forget his own contribution to the 1971 disaster, Mr. Bhutto may circumscribe popular freedom in the minority provinces and whip up traditional anti-India feelings and sustain tensions along Indian and Afghan borders in order to remain in power. This last consideration called for strong armed forces. Hence Mr. Bhutto's primary concern in the early years of his office was to expand the armed forces further, by securing external help. A purge of sorts of senior armed forces was carried out which left Gen. Tikka Khan firmly in charge of armed forces, who was utilised to retrain the new and expanded army. (The two, at that stage, were natural allies since they did not want Pakistanis to remember their contribution to Pakistan's dismemberment)

When he felt strong enough in the country after eliminating political opponents both within the ranks of his own people's party as well as leaders of the opposition, and constitutionally ensuring that he would remain in power for at least fifteen years, Mr. Bhutto announced the retirement of Gen. Tikka Khan from the army and the induction, not only of a new army chief of staff but also the creation of the appointment of a whole time Chief of Defence Staff.

This was announced by Mr. Bhutto in a broadcast to the nation on December 20, 1975, but changes were brought into effect only towards the end of March when Gen. Tikka Khan completed his extended term of office and retired from the army. A White Paper on the subject of higher defence organisation was formally issued on May 12, 1976* placing on record the changes brought about.

The White Paper stresses, appropriately, that as Chief Executive of the Federation, the Prime Minister is responsible to the nation for safeguarding the sovereignty, independence and territorial integrity of Pakistan and for preserving and protecting the country's Constitution. It specifies the authorities and organisations who would have responsibilities for the higher direction of national defence and seeks to define their duties. These are :

- (a) THE PRIME MINISTER whose specific responsibilities would be to :
 - (i) Allocate resources for defence, within the capacity of the State in fulfilment of its short term and long term interests ;
 - (ii) Establish, expand and/or reorganise institutions to ensure the coordinated application of such resources ;
 - (iii) Ensure the raising and development of armed forces commensurate with national requirements, resources and priorities;
 - (iv) Coordinate defence policy with domestic and external policies.

* Reference Morning News, Karachi, dated May 13, 1976, Material for this Paper has largely been drawn from this source,

(b) THE DEFENCE COMMITTEE OF THE CABINET (DCC)

The Prime Minister though empowered by the Constitution to act directly, acts in practice with the concurrence of the Cabinet, where important issues are involved. Matters relating to defence are to be considered by the Defence Committee of the Cabinet. The Committee, chaired by the Prime Minister would include as permanent members the Ministers for Defence, Foreign Affairs, Finance, Interior, States and Frontier Regions, Kashmir Affairs, Information and Broadcasting, Communications, Commerce, Industries and Production. The Chairman, Joint Chief of Staff Committee (JCSC), the three Chiefs of Staff, Secretaries General, Defence and Finance and Secretaries of Defence, Foreign Affairs and Finance would be in attendance. Other Ministers and Secretaries would be called in if required. DCC's duties would be to :

- (i) Define, from time to time, the tasks of Pakistan's armed forces in accordance with national policy as laid down by the Cabinet and secure from the Chairman JCSC the necessary assessments and plans for the fulfilment of defence policy ;
- (ii) Consider such assessments and plans and constantly review the organisation of the country's defences and preparedness for war ;
- (iii) Ensure coordinated action on the part of different ministries on foreign, political, economic and administrative policies which have a bearing on the country's defence potential ;
- (iv) Supervise the conduct of war during hostilities.

(c) THE DEFENCE COUNCIL (DC)

The DC presided over by the Prime Minister, would include the Minister of Finance, Minister of State for Defence and Foreign Affairs, the Chairman JCSC, the three Chiefs of Staff, Secretaries General, Defence and Finance and Secretaries of the Ministries of Foreign Affairs, Defence and Finance. Others would attend by invitation when issues concerning their Departments may have a bearing on matters under DC's consideration. The task of the DC would be to translate national defence policy as decided upon by DCC into military policy. More specifically, the DCC's tasks would be to :—

- (i) Examine, review and recommend for DCC's approval, the role, size, shape and development of each of the three services and other defence establishments as well as budget allocations for each.
- (ii) Review all assessments and plans concerning defence put up by the Joint Chiefs of Staff Committee or other departments for submission to the DCC.
- (iii) Formulate policies for indigenous production, research and development and for induction and procurement of defence materials and equipment.

(d) THE MINISTER OF STATE FOR DEFENCE (M.O. S/D)

He is responsible to the Prime Minister for ensuring :—

- (i) Effective civilian participation in the war effort and smooth functioning of all services during war ;
- (ii) Through appropriate Ministry/Division or other institutions and organisations, that training is provided to the people in civil defence, fire fighting, first aid, defence against air attacks, etc. ; and
- (iii) Coordination through the Secretary General, Defence, the working of the Defence Division, Defence Production Division, the Joint Chiefs of Staff and Services Headquarters.

(e) MINISTRY OF DEFENCE

This is the Defence Minister's (i.e. Prime Minister's) Secretariat and is headed by the Secretary General (Defence) and consists of the Defence Division, Defence Production Division, Aviation Division, the Joint Chiefs of Staff Committee and headquarters of the three Services.

(f) JOINT CHIEFS OF STAFF COMMITTEE (JCSC)

This is the highest body for considering all issues and problems bearing on the military aspects of national defence and rendering professional advice thereon. It is presided over by a permanent chairman, with the three service chiefs as members. The Secretary of the Defence Division would attend all meetings of the Committee. JCSC is to be responsible for :

- (i) Preparing joint strategic and logistic plans ;
- (ii) Providing strategic direction to the armed forces ;
- (iii) Reviewing periodically the role, size and shape of the three services ;
- (iv) Advising Government on strategic communications and the setting up a dispersal of major industries, industrial mobilisation plans and for formulating and reviewing defence plans.

(g) JCSC ORGANISATION

JCSC is an inter service body organised into Directorates which at present would consist of—

- (i) Operations/plans ;
- (ii) Training ;
- (iii) Pacts and agreements—implementation ;
- (iv) E in C's branch ;
- (v) Logistics ;
- (vi) Inter Service Public Relations ;
- (vii) Personnel ;
- (viii) Motivation/Patriotic Training/Discipline.

(h) CHAIRMAN JCSC

His main function in peace time will be to plan for the defence of the country, including planning for war. In war, whether declared or not, he

will act as the PM's Principal Staff Officer in the supervision and conduct of war and as overall coordinator to the extent authorised by the PM who would continue to exercise supreme command over the Forces. He will not interfere with or give directions to the Services about their normal functioning, nor will he exercise any executive authority in peace time. Also in peace time, whenever there is any divergence of views among the CS of S and the Committee is unable to agree, the Chairman JCSC will present the alternatives as formulated during discussions and give his advice to the PM for his decision. During war he will take decisions as authorised by the Prime Minister.

The White Paper also makes it clear, in defining the role of the three Chiefs of Staff that they would continue to be advisers to the Prime Minister and the DCC besides being responsible for raising, training, administration, morale and discipline of their respective forces and for the conduct of operations. They would continue to have direct access to the Prime Minister.

In this setting, Services Headquarters become part of the Ministry of Defence, although the three Chiefs of Staff continue to exercise functions of command over their respective Services.

This reorganisation, the White Paper emphasises, "was evolved in the light of the following five principles on which alone a coherent and viable defence policy would be evolved"

- “(A) Full combat power of available forces can be developed in peace and decisively applied in war only when they have a single aim and a clearly conceived overall strategy. Instead of a mere coordination of inter service plans which entails an uneasy compromise, there must be a jointly conceived and developed national defence plan.
- (B) This calls for a permanent and cohesive higher defence organisation. Coordination or unification brought about under the stress of emergency evaporates in easier times of peace. Further, coordination in actual operations could be precarious unless the necessary infrastructure for effective coordination is established before hand and essential procedures for joint action are laid in advance.
- (C) Higher defence organisation must not be a set of ad hoc committees, nor must national defence policy be based on occasional and ad hoc studies. Defence planning is a continuous process and can be carried out only by a permanent inter service set up.
- (D) While the three Services should be instruments of an integrated defence strategy, matters may arise which may be of conflicting concern to them—e.g., selection and induction of weapons systems. Production of weapons largely reflect demands of one Service which may not be harmonious with weapons and equipment systems of other Services, or may draw off excessive funds

from the Defence Budget, creating areas of deficiency elsewhere in the total defence system. Higher Defence organisation must give unbiased and correct military advice on these matters transcending the interests of individual Services. It must determine priorities in overall national interests without impairing the efficiency of the three fighting Services.

- (E) Defence is a matter of the most judicious and cost effective use of resources. It cannot afford waste or duplication. This can be ensured only by an unbiased planning and controlling authority, who will also translate into military terms, the defence policies and other directions handed down by the Defence Committee of the Cabinet”.

IV

THE IMPLICATION OF THE REORGANISATION

Underlying Pakistan's new higher defence machinery is the cardinal principle that in a modern state, defence forces are merely instruments for executing state policy. Their chiefs and other professional and administrative heads have the task of advising and assisting political leaders in evolving policy but the ultimate responsibility for making policy decisions in respect of national defence rests with political leadership. In order to ensure the supremacy of political leadership and eliminate opportunities for ambitious military leaders from staging coups, a joint staff has been created with a whole time chairman, who by virtue of his office would be senior to chiefs of the three services and function as ex-officio Principal Staff Officer and Adviser to the Prime Minister. Lest the Chairman JCSC himself tries to become a Supremo and take over control of the State, it has been explicitly laid down that he will have no powers of command over any of the services and his functions would be confined to operational planning, joint training, logistics and coordinating action in these areas in peace time and acting as the Prime Minister's Staff Officer in wartime. The Prime Minister, it needs to be noted, remains the Supreme Commander of the country's forces. This formal assertion of the supremacy of political leadership in framing policies involving vital decisions on war and peace ought to be welcome to democratic elements within Pakistan as well as to Pakistan's neighbours and especially by those who, on several occasions in the past have been victims of Pakistan's aggression.

Equally important is the fact that decisions on war and peace would be taken by the DCC. Although a forceful Prime Minister like Mr. Bhutto may be expected to have his way in the Cabinet, the fact that he has to take his senior cabinet colleagues besides military chiefs and senior civil servicemen with him, would provide some assurance that the country will not plunge into war without due deliberation and discussion. Hopefully, an assembly of political, military and administrative leaders would be able to take more balanced decisions affecting the nation than military dictators

surrounded by their favourite subordinates who would not be able to speak freely.

Under the new dispensation, allocations of funds for individual services, force levels and acquisition of equipment both in respect of types and quantities would be decided by the Defence Council and individual service chiefs can only make suggestions. This again, is a step towards ensuring that no single service dominates the others and operational needs alone, in consonance with previously formulated national priorities, would determine the size, composition and equipment of individual services.

The new organisation and procedures would certainly ensure, as far as it is humanly possible, that Bonapartism would not rear its head again in Pakistan. If it also succeeds in enabling Pakistani leaders to view national needs objectively and realistically and frame policies not in a spirit of permanent hostility towards neighbours and of waging holy crusades, they would find it easier to take their country on the road to greater political stability and more rapid economic development.

For us in India also, the pattern evolved in Pakistan has its lessons. Most of these are, no doubt, obvious and have been pointed out in the past by military thinkers and analysts. Even so they bear reiteration.

In India, fortunately, the supremacy of political leadership has never been in doubt, the armed forces have always been apolitical and there is no danger of Bonapartism arising.

The planning and execution of military operations; however, is largely conducted by individual services. This means that the Service most concerned with a particular operation evolves a plan, with the other services providing support to the extent they can, depending not necessarily on the needs of the situation but on supporting services' other commitments as they may visualize them at the time. In such situations, uneasy compromises would necessarily be made, which may have unfortunate consequences on the course of operations. Also, in the matter of deciding on new equipment, the viewpoints of individual services rather than overall needs may receive emphasis. Unbiased appraisal of defence needs in the context of the policy laid down by political leadership can only be made by a professionally competent and well-knit joint staff. Such a joint staff, with their own whole time chief would also ensure that resources are conserved by providing common support and infrastructural facilities to the three services to the maximum extent possible without impairing their operational efficiency. This would save senior civil servants in the Ministry of Defence from the embarrassment of having to arbitrate on all inter-service disputes and misunderstandings and at the same time enable our Defence Ministry and inter services organisations to shed a good deal of their unwanted fat.

APPLICATION OF MANPOWER CEILING TO ARMED FORCES IN INDIA

D S NAKRA

THE Indian Army has been operating under a manpower ceiling for more than a decade now. New raisings and organisational changes involving additional manpower have to be accommodated within the ceiling by balancing reductions elsewhere. A similar ceiling has lately been imposed on the Air Force. Navy has so far escaped this constraint, but it may be on its way.

A question has been raised whether a manpower ceiling has served any useful purpose and if so, what. The obverse aspect of the question is whether the ceiling has inhibited rational and scientific planning or even if it has not operated negatively, has it not outlived its utility and if so, should it not be done away with.

Before these questions can be answered, it seems necessary to examine briefly how the ceiling came into being. As far as I know, the idea of a ceiling was not the outcome of an internal necessity—it was not an answer to the problem of evolving an effective means of self-imposed discipline and control; in fact, it was formulated primarily to meet a diplomatic and external requirement. It was evolved after our inglorious reverses on our northern and north-eastern borders when we came close to accepting military equipment from the U.S.A. There was an American Mission in New Delhi, and our requirements had to be projected to it. The acceptable basis was an Army large enough for successful defence but without potential capacity for aggression. It was in this context that the manpower requirements were worked out—the ceiling figure was thus the maximum number that could be reasonably projected. That is why it covered only combatants and civilians were excluded—an effective ceiling should cover both. It was not the result of a detailed and comprehensive analysis to determine the minimum force at optimal operational or organisational efficiency; it was a quick exercise in plausible projection rather than a precise estimate of our possible requirements. The ceiling had thus a fair margin of manoeuvrability in it—a fact that should be borne in mind when assessing its validity and value. It is also necessary to remember that no

such ceilings were projected for the Air Force and Navy—the unstated reasons obviously being that real strike capability of these two Services could be achieved only with new ships and aircraft, which India, with its financial constraints and ambitious programmes of development, would take years to acquire. The question of manpower stabilisation in these services did not arise at that stage.

It was only with the passage of time that the projected manpower ceiling for the army came to be looked upon as a convenient control mechanism by Defence and Finance Ministries and was accepted as a means of internal discipline by the Army Headquarters. As such the ceiling has achieved two things : firstly, it has helped to keep the Army budget in some check so that, in spite of the inevitable developmental inflation, it has not burst beyond a point and secondly, it has enabled the General Staff to improve operational efficiency (teeth to tail ratio) and optimise organisational economy.

But to state the operative characteristics of the man-power ceiling is not to justify or defend it. In fact, I am of the view that in the context of modern times, the very concept of ceilings, financial and physical, is rather obsolete. The concept embodies a crude mechanism of control devised at a time when there was a certain continuum of stability both in prices and the physical means of achieving the objectives of our policies and plans. Besides our policies and plans had not assumed the developmental dimensions that they have now; nor had they gained the momentum of current social economic urgencies. The situation has thus materially and phenomenally changed since "ceilings" were adopted as means of control. Inflation is written into the Western system of economic development.* There was a time when a Rs. 300 crore Defence Budget was viewed as large, today an annual budget exceeding Rs. 2000 crores is found to be inadequate. Monetary ceilings by way of plan provisions and annual budgets have therefore to move up continuously and in the process some vital constituents of the Defence plan get guillotined or so badly mutilated that they become ineffective or in some cases even wastefully counter-productive.

Apart from obstructing or delaying the introduction of modernisation plans or reducing their effectiveness, ceilings imperceptibly lower the standard of defence preparedness. When the cost of manpower rises by way of pay and allowances, rations clothing, accommodation, civic amenities, etc., the availability of funds for equipment is adversely affected to

*How it works cannot be discussed here, but those interested in the subject may see the author's articles on "Inflation, the Fifth Five Year Plan" and "Social Economics" published in the 1974 annual number of "N.I.F. (National Industrial Finance—Delhi)" and the Aug.—Sep. 1972 Issue of the "Finance & Commerce" respectively.

some extent and consequently there is qualitative or even quantitative deterioration. Operational efficiency and morale both suffer.

Some times, ceilings have just the opposite effect of what was possibly intended. Even when reductions far below the ceiling levels are possible, the ceiling is adhered to as something to be jealously secured lest it should be lowered.

Vital though manpower still is and always will be, it is not so much its numerical strength as its quality that has assumed greater importance, specially in the Air Force and the Navy. Technological change in general and sophistication of the weapons of war and equipment in particular demand technique-oriented soldiers with, of course, the traditional fighting quality. The manpower requirement per unit of organisation and operation has also tended to come down. Greater mobility and mechanisation of services has produced similar effects on the supporting units. Special operational parameters such as those prevalent on our northern and north-eastern borders have further contributed to reorganisation on the basis of optimal operational efficiency with minimal numbers. So long as the situation on our borders remains as it is, we will of course need numbers too, but numbers by themselves, are only one of the decisive factors in defence planning today. Large armed forces are more effective in prolonged wars fought with comparatively unsophisticated weapons; in short and fast and generally undeclared limited and local wars launched to grasp quickly gains which cannot be secured by diplomacy and economic pressure, the quality of weapons and equipment and the capacity to use them effectively is becoming increasingly more important than just the numbers. In spite of the experience of the Korean War and the Chinese massive armies, the weight of numbers must be matched by optimum effectiveness of weapons and integrated operations. The grand strategies and the basic principles of successful wars may not be materially different today but revolutionary qualitative changes have taken place in all spheres of defence preparedness and operations and these have to be cognised before the mechanism of the most cost-effective management of Defence expenditure can be designed and operated. Besides, the fluidity of international environment and of inadequate political and economic stability demands a margin of flexibility in planning which rules out conceptual rigidities implied in financial and physical ceilings as means of control and regulation at least at the macro level of Defence planning.

It can be argued that the manpower ceiling has held the operation of Parkinson's law in check ; even at times of stress it has forced the most economical use of available human resources. I have already conceded this point when I said that the ceiling has promoted a certain amount of internal discipline, but this is a negative virtue. Ceilings discourage

positive thinking in normal times, they leave dead wood where it is for fear that if it is cut it might lead to reduction of financial allocation instead of its diversion to more purposive uses. Crisis-oriented administrative tendencies develop; we seem to wait for critical situations to help us to by-pass cumbersome controls by administrative arm-twisting of the Finance Ministry—an exercise that is freely and often gladly practised.

All this happens because what is good at the micro level of administration is unimaginatively extended to the macro level undermining the flexibility of operation that should characterise this level. At this level, the concept of ceilings is a reflection of mental, intellectual and visual limitations. Creative and constructive minds operate to regulate and not obstructively control human and material resources at their disposal. When we throw up our hands and declare ourselves bound by inflexible rules and regulations and tortuous procedures we are showing signs of administrative paralysis which manifests itself first in mental rigidity followed by the malfunctioning and even disfunctioning of the entire structure. We have to guard ourselves against this fast spreading virus. We have to ensure that "ceilings" do not suffocate.

The problem today is that of complete re-orientation of obsolete and obsolescent techniques to suit changed conditions—the problem is that of adoption of sensitive management techniques in place of outmoded traditional practices. The management techniques are not reserved exclusively for industrial and business management; in fact most of them were evolved to suit the demands for speed, accuracy and hundred per cent reliability that characterised defence planning and operations. Cost-effectiveness can be ensured only by the application of these techniques.

We are now embarked on a multi-dimensional programme of national development which aims at being comprehensive in scope and intensive in depth. Various components of this ambitious programme naturally compete for the rather limited resources. It is a pity indeed that all through the National plans so far (at least up to the end of 1972) no sensitive system had been evolved to formulate and assess the defence plans and to incorporate them in the national plans. No member of the Planning Commission has the specific responsibility for Defence Plan; there is no cell in the Commission for it, a certain level of defence expenditure based on historical growth has been taken and included in the national plans without any scrutiny into its contents and without any analysis of its future requirements and a deliberate effort to provide for such of these requirements as are clearly seen to be unavoidably essential for national security. At the base of this attitude of pathetic and almost casual unconcern lies the unexpressed thought that defence expenditure is

unproductive but unavoidable*. The attitude seems to say: "Let a suitable provision be made for it and be done with and then the country go on with economic development". A similar attitude is observed in the Parliament which appears to think it unpatriotic to question or analyse for adequacy the provision for defence; everything is taken on trust. This is not a happy state of affairs. Too much is being taken for granted. The Planners' unconcern and the Parliament's (peoples) apathy can be dangerous. It does not make for dynamic defence management and does not generate constructively imaginative thinking; it only supports and justifies hand to mouth living. The situation must be remedied—the sooner the better. If, on the one hand, wasteful and unproductive expenditure is to be avoided and on the other, dangerous gaps in defence preparedness are not to be allowed to remain exposed and hence unprovided for, long-term perspective planning for the next 15 years or so must be attempted; and it is in the matrix of this planning that the 5-year plans must be accommodated and the micro-texture of annual plans in terms of physical and financial targets must be worked out. Hastily formulated "time-bound" and "result-oriented" schemes expected to yield spectacular results have a way of coming to grief. It is generally not realised that to operate on a "war-footing" is the most wasteful method of achieving steady development in peace. Apart from other consequences, it can generate and intensify economic civil war (not just the scramble for funds) and thereby jeopardise the success of the National Plans.

It is often forgotten in peace time that if the fruits of development are to be enjoyed in peace they must be secured from any aggressor who may be tempted to snatch them from us. Prosperity must be balanced and ensured by security. The Defence Plans must never be treated as adjuncts to the National Plans but must be integrated into all of them—the long term perspective plans, the Five Year Plans and the detailed Annual Plans. And to be meaningful total need-based plans must be worked out first before setting in motion the processes of selective priorities and pruning with reference to the resources that can possibly be made available. That would be the real discipline of an integrated National Plan.

It has sometimes been suggested in certain quarters that the

*A good part of defence expenditure is not as unproductive as it is believed to be. Nobody has assessed the qualitative value (in terms of savings in social costs) of the contribution that the services make by way of inducting into urban and rural civil life a body of healthy, trained and disciplined men who are a stimulating, almost catalytic, force for stability and progress. But even apart from this, Defence production and servicing and maintenance organisations are making a substantial quantitative contribution to national economy—a contribution that can be increased manifold by the process of integration with the national plans. This subject cannot be discussed here, but an idea can be had from the author's article on Defence and Development published in the June 1974 issue of the 'Yojna'—the magazine of the Planning Commission.

overall size of defence plans can and should be determined as a reasonably adequate percentage of G.N.P. This is not a practicable proposition. Such a percentage cannot be determined unless a fairly detailed need-based long-term plan is available a high percentage of G.N.P. will not be given just for the asking when so many competing development needs are crying for funds. In any case to fix monetary and physical ceilings first and then to fit Defence Plan into these ceilings is, in my view, the wrong way of getting about the business and in fact, the most costly way. This is the way of waiting for a crisis to make a clean sweep of make-believe illusory assumptions and artificial restrictions. It is because of this way of thinking that despite clearly known defence requirements, all the three Services, specially the Navy and the Air Force are not as adequately equipped as they should be to constitute a convincing deterrent to a would-be aggressor and a fateful reply to him if he takes a chance.

It is only in the context of total need-based perspective planning that policy parameters get clearly defined—viz whether we want just to defend ourselves against the wall, as it were, or whether we wish to have the capability to repel the aggressor with maximum loss from which he will take long to recover or still further whether we would like to be capable of pre-emptive strikes too. The time-span within which we wish to achieve our objectives will also have to be prescribed for proper and adequate allocation of material and financial resources. The policy decisions thus taken will determine the content of the Defence Plans in regard to both the quality and quantity of weapons, equipment, defence production and of course manpower. Even then the Defence Plan may have to be adjusted to changes in geo-political factors from time to time, but it must never be allowed to deteriorate into just the maintenance of the Services at certain numerical levels with whatever equipment we can manage to have.

Need-based defence planning will put into motion compulsive forces for optimum efficiency and economy.

- (a) Firstly selective priorities will ensure that low priority and/or half-way compromise measures are not put through because of apparently low cost, such measures ultimately prove more costly as they fail to achieve their stated objectives.
- (b) Secondly, a lot of both organisational as well as material dead wood will be got rid off to accommodate more urgent needs. For example, the JCOs cadre may disappear.
- (c) Thirdly, scales of issues, and reserves will be rationalised to find funds for larger forces and/or better equipment.
- (d) Fourthly, it will lead to a re-examination of recruitment and training policies and length of colour service*. With ever increas-

*Extension of colour service has been announced since this article was written.

ing output of trained personnel from national training establishments, it will be possible to recruit trained men instead of raw hands and then training them in the Services at considerable cost.

- (e) Fifthly, the maintenance services will be rationalised. The minimum educational level could be raised to Matriculation/Higher Secondary to ensure better handling (including routine maintenance) of sophisticated equipment which will result in low maintenance and repair costs. And with the introduction of indigenous equipment, maintenance and repair could be restricted to assembly/sub-assembly and major components replacements and therefore could be decentralised resulting in reduction of maintenance services. Major repairs including over-haul and re-conditioning of assemblies, etc. when found to be more cost-effective than discard and disposal, could be entrusted to the factories concerned or their special sub-units instead of specialised service establishments within the Armed Forces.
- (f) Sixthly, greater inter-service integration will gradually take the place of water-tight separate organisations—not only in operational plans and programmes but also in such matters as personnel management (specially in regard to their emoluments, etc.) and manufacture, procurement and standardisation of stores and equipment, particularly those with basic commonalities such as electronic equipment, missiles, etc.
- (g) Seventhly, it will lead to effective and real delegation of powers of expenditure within the clearly defined parameters of the approved plans and the strangle-hold of highly centralised administrative and financial control will be relaxed considerably. And with greater responsibility at different levels the capacity to take the initiative will also develop fast.

These and many other changes will flow from the re-thinking generated by perspective planning.

18. This total integrated planning can be best done by the full-fledged adoption of the P.P.B.S. - Planning, Programming and Budgeting System*. At the same time, the application of modern management techniques will ensure the best utilisation of human and material resources. The end result will be much more satisfactory than such control mechanisms as "ceilings" can ever achieve: at best, they will be rightly relegated to the field of micro-management in which they will have some practical utility. Afterall, cost-effectiveness is not just cost-reduction; it is a positive aspect of optimal efficiency, not the negative postponement of essential expenditure till the critical hour.

* Those interested in the subject may refer to the author's article on Financial Management in Defence Services in the July-September 73 issue of the U.S.I. Journal.

INDIA'S CONTACTS IN SOUTH EAST ASIA UNTIL THE ADVENT OF ISLAM

MAJOR GENERAL TNR NAYAR, PVSMM (RETD.)

INTRODUCTION

MODERN researches have conclusively proved that the peoples of ancient India had established firm and friendly contacts with the peoples of SE Asian countries very many centuries before history came to be recorded. The thorough examination and studies carried out by experts like George Cordes, Paul Wheatley, B.R. Chatterjee, R.C. Mazumdar and others have brought to light that these contacts were present, even as early as the later phase of Neolithic Age. Undoubtedly, the Chinese and the Vietnamese also influenced powerfully these areas. Mainland China acted as an imperial land power with political and commercial interests across the oceans. This outlook made the Chinese activities expansionist in character, and they waxed and waned according to the grandeur and military prowess of the Central Kingdom. As we shall see, India's contacts were on an entirely different plane. It was practically bereft of political ambitions, but was influenced by adventure, culture, religion, commerce and desire for permanent settlement.

Ancient Indians took to sea, during the beginning of the Bronze Age. At first their sailings were confined to coastal regions. But the innate urge of man, coupled with the accidents of discovery, and the enterprising spirit of mankind, made them probe deeper, and it has now been established that by about BC 1000, Indian ships were regularly plying both in the Arabian Sea and the Bay of Bengal. Indian mythology is rich in naval anecdotes. Our ancient law giver, Manu, coded for maritime emergencies as well. Chanakya went even further in his Arthashastra, and has spelt out the duties of Harbour Masters and so on. It is well known, that out of the six departments of the Mauryan Empire, one was exclusively dealing with maritime matters. It is also very pertinent to note that both in Sanskrit and Tamil, hundreds of words are in use from ancient times, to convey subtle maritime activities. True, there was fear and reservation about the ocean in places far inland. But nearer the coastal regions, the ocean was regarded as a medium to be exploited by the enterprising. India's naval traditions received a serious setback since the arrival of the

Portugese and other European naval powers. After the British conquest, it was the official policy to discourage Indians joining in the navy and the artillery. The British pampered historians went even further, and chose to ignore the country's past maritime traditions. A change in this outlook took place only after the Second World War, when K.M. Panicker and others brought out fresh publications, revealing a wealth of naval heritage.

THE BAY OF BENGAL

Indian Ocean, the third biggest is unique in many respects. In the northern hemisphere, it is capped by the Indian peninsula, and extends up to the tropics. Navigators consider this ocean as a kind one, in comparison with their tragic and traumatic travails in the Pacific and the Atlantic. The Bay of Bengal is almost half as big as Europe. It is bounded by India and other littoral states like Bangladesh, Burma, Malaysia and Indonesia. Through the Straits of Malacca, direct approach extends to Combodia and Indo-China on the China Sea. Beyond are Taiwan, China and Japan.

Sailing in the Bay has always been more tortuous than sailing in the Arabian Sea. Typhoons and hurricanes have taken their toll, but these have not deterred our enterprising ancestors from pursuing their insatiable quest for adventure. The seasons of the trade winds and the monsoons were availed for voyages. There are two monsoons, the SW and the NE. In fact, the NE monsoon is a continuation of the NE Trade Wind, when this comparatively gentle breeze aids the navigators. The SW wind tends to be rough and is intermingled with typhoons.

There are many commonalities amongst the littoral countries of the Bay. The climate varies only between the equatorial and the tropical. There is an abundance of sunshine and rain. These coupled with humidity and favourable soil formation, permit the cultivation of rice, vegetables and spices. There is much identity with India in the local fauna and flora. It was for these natural reasons that the peoples of the littoral states of the Bay developed a common bondage from times immemorial. It was due to the same cause that the Chinese failed to develop a feeling of oneness and cultivate brotherhood. All the time they wanted to dominate, and thrust on the locals their way of life. Naturally, this was resented and the Chinese strains remain insular even today.

EARLY ATTEMPTS AT SAILING BY INDIANS

People on sea board are favourably located to acquire the art of sailing. Still, all coastal people do not achieve this trait. There must be a natural, socio-economical or historical urge to do so. It may arise of pressure from the mainland to look outwards for a living, or for profits. A maritime life has always carried with it various risks, and only the needy and the adventurous take to it. Any community with naval traditions would have behind it very many centuries of navigation. Transoceanic

navigation is quite different to coastal navigation ; both being poles apart from sailing in rivers. Various disciplines of national life have to be systematically syphoned to generate a maritime community.

In these respects the coastal belts of India were fortunate. The ocean was comparatively bountiful, and it invited the enterprising by means of a large number of well placed islands and favourable wind conditions. Indian astronomers and mathematicians were amongst the first to chart the sky and the ocean, design the 'Matsyayantra' (a kind of mariners' compass) and record their findings of the trade winds and monsoons. To these, nature gave a helping hand by providing teak and cardage in the vicinity. For, it is an inescapable necessity for ocean going vessels to have a special kind of construction of great strength and endurance. The ships draught, carrying capacity, speed and use of sails played important parts. Progress was often slow and expensive, and mastery was acquired only after many trials and errors. It is not an accident that the very first incarnation of Lord Vishnu was as a fish.

By about the third millenium before Christ, in India coastal trading was in vogue. Indisputable evidence of commerce with Babylon is available at Harappa and Mohenjodaro. The first evidence of Indian settlement in Java is dated about BC 1000. About this time, there was an overland ingress from Malay of the Mongols as well. Oceanic sailing appears to have made slow, but steady progress there after. The earliest Indian settlements might well have taken place as a result of forcible stay, for the art of sailing close to the wind came to be developed very much later. The use of lateen sails, which permitted sailing close to the wind, was developed only by about BC 600.

Many factors should have influenced Alexander of Macedon to come to India in 326 BC. One of them certainly was the favourable trade India had with the Empire of Darius. Alexander's perilous return was along River Indus and Persian Coast. He had the assistance of Indian pilots. In spite of such contacts, the Greeks acquired knowledge of the monsoon only when Hippolus learned of it from the Arabs, two centuries later. The establishment of Macedonian power on the borders of India had certain indirect influence on Indian trade and shipping. Gold, which used to reach India from Central Asia, got redirected to the West. This acted both as a provocation and as an incentive to search for the yellow metal in the East, which had in the past a reputation as the 'Land of the Gold'. We know that when Rome was in her glory, Indian ships regularly visited Red Sea and Persian Gulf ports with cargoes consisting of the produce from SE Asia. But much of the profit from this trade was earned by the Arabs who acted as middlemen. They successfully prevented direct commercial negotiations between the parties. At a later date, Indian and Arab trading establishments sprang up, side by side, all the way from Arabia to Indo-China.

By now, Indian sailors had mastered the use of lateen sails and could sail in both directions, almost at will. They had gone beyond Malacca, and had dealings with Cambodia and Indo-China. The foundations of the future state of Funan was laid at about this time. According to some records, ships carrying even five hundred people were not uncommon. It was in such a ship that Emperor Ashoka sent his sister to Ceylon. The impact of Buddhism also aided maritime activities. Its protagonists wished to go by sea to China as land route was hazardous. The sea route was more inviting than the treacherous and inhospitable overland routes across either Tibet or Burma.

Strict vigilance was maintained by the state Governments to ensure the seaworthiness of the vessels. Harbour Masters and Port Commissioners had stringent instructions concerning safety, victualling and sailing standards of the crew. In the absence of direct evidence, many inferences have been drawn from the usage of technical words found in ancient Sanskrit and Tamil literatures. By about the sixth century AD, Indians had in use signal procedures and other conventions which would permit fleet actions. In record is the sailing to Java of a big fleet carrying over five thousand personnel and much stores from Gujarat, in AD 603. Over one hundred ships formed this veritable armada.

The Chinese did not devote continuous attention towards oceanic sailing. Their junks were coastal cutters. The Middle Kingdom periodically woke up, and fitted up large fleets. But normally Chinese attention was directed landward—towards Central Asia. They were preoccupied with the task of looking after their adjacent countries—Indo-China, Tibet and Sinkiang. Another factor which discouraged the Chinese was the very long return time their ships had to endure for each round trip. This increased the hazards of commerce, and diminished the profit ratio. Due to climatic differences, the Chinese were generally unwilling to intermingle and settle in the countries of SE Asia. In spite of all these restrictions, the gravitational pull of Chinese mainland was eternal, and it erupted into a force to be counted upon whenever the Imperial power was strong and unified. It would not be too wrong to hypothesize that the Mongol hoards of Central Asia played a major role in containing the colonial ambitions of China, until about the 13th century.

A SURVEY OF THE SE ASIAN STATES

Burma (Indradweepa) is contiguous to India, though separated by broad and treacherous rivers and inhospitable and disease ridden jungles. In this country, Indian, Thai and Chinese influences have clashed at various periods of their national histories. Indian political occupation took place under British Imperialism, i.e. under a colonial power. Otherwise Indian influence has been through religion, culture, art and so on. The daily rituals of the people, the fundamentals of law and administration,

and the codes of commerce were also influenced by the contacts with ancient India. Compared to this, the Thais and the Chinese staged a number of invasions, and for many centuries, occupied portions of Burma. However, Burma cannot be geographically included as an SE Asian country; it is part of South Asia, and as such is not discussed further.

Malaysia (Malaya Desha) consists of its Western or the continental wing, and the eastern wing consisting of Sarawak and Sabha. It is nearly 1.3 million square miles in size. During its chequered history, it had been under various political powers. Malaya is covered with jungles and swamps, even today. A chain of mountains stretch from the North, forming a rib, to Malacca and beyond. There are many fair sized plains, which are cultivable, and have become centres of population. Many rivers are navigable, an important feature. It permitted ancient Indian settlers to penetrate into the interior. The equatorial climate was to the liking of Indians, especially for those from South India. The strong sun, wet monsoon, and humid climate are ideal for rice cultivation. All these features encouraged many Indians to settle down, inter-marry, and raise a homogenous culture. Out of about 10 million people, Indian citizens as such are few, but the cumulative effect of Indian inter-marrying has been considerable. Bahasa Malaysia—the official language has a generous content of Sanskrit and Tamil words and phrases. Today, Malaysia enjoys the highest per capita income in SE Asia, thanks to her plantations and minerals.

Indonesia is an island kingdom. It consists of three big islands—Java (Yavadvipa), Sumatra (Savarnadvipa) and Borneo (Varunadvipa) and over three thousand smaller ones. The mountain range of Malaysia continue (at some places under water) and forms a crescent, all the way to Australia. However, there is one major difference. Some of them are active volcanoes. Here also, the coastal areas are rich and cultivable. There are many natural ports—a boon to navigators; but some of them are hazardous due to submarine obstacles. The climate is tropical, like India's, and the similarity of fauna and flora is striking. The ethnic group is predominated by those of early Malayan origin who may now perhaps be more correctly called Indonesians. Muslims constitute about 90% of people, but they are startlingly different from other Muslims in many customs, rituals and outlook. Bahasa Indonesia—the state language, has many Sanskrit and Tamil words. With boom in oil prices, and by virtue of natural resources like tin and rubber, she should soon be riding high on the wave of prosperity.

Indo-China was formerly divided into many petty kingdoms. Steep but negotiable mountains and jungles separate it from mainland China. This led to incessant warfare and periodical subjugations. But the Chinese were not successful to permanently suppress the freedom loving Vietnamese. The rivers are helpful though tricky in monsoons. Their estuaries are very

fertile. There are many ports. Some of these are impregnated with the momentous events of ancient history. In the coastal areas the climate is conducive to Indians to make their settlements, though towards the north it is uninvitingly chilly.

Thailand (Funan) has a long coastline, about 1700 miles split between the Bay of Bengal and the Gulf of Thailand. It has an area of nearly 2 lakh square miles and a population of 87 million, mostly Buddhists. The country has been on the highway of Chinese and Japanese invasions. The Thais too had waged wars of expansion. Consequent to all these, there are some thirty ethnic groups amongst the population. The Chinese influence is clearly visible in political and administrative infrastructures. The milder, but more enduringly assimilated ancient Indian mythology and culture are discernible in folk lores, dances and names.

Cambodia (Kambaja Khmer and Chenla) is sandwiched between Thailand and the Vietnam. This country has forestal mountains and well watered plains. Lake Tonle Sap, and Mekong River provide muscles to this country. It has great likeness to India in many matters. The ancient, Indian influenced Funan Empire ruled over this country, until the Khmers overthrew it in the sixth century AD. The ancient capital city of Angkor bears clear evidence of Indian presence.

The hapless Vietnams (Champa) may be considered to be the farthest extend of SE Asia. It was also the farthest Indian settlement in ancient time. Over here, the Chinese attacks had been more persistent, even though the freedom loving Vietnamese people periodically overthrew their conquerers. But the Red River Delta and the coastal towns bear evidence of Chinese rule. Their coastal junks and mainland armies had left many unmistakable scars. On many occasions, it was to the Annamite Cordillera and other high mountains that the Vietnamese retreated in the face of Chinese conquests. Sure enough, they counter attacked and regained their country at the earliest opportunity whenever they lost their independence. Currently traces of ancient Indian settlements are hardly noticeable.

To sum up, the SE Asian states and regions which attracted early Indians had an astonishing extend of identity with the mother country in climate, flora and fauna, cereals and so on. There could be no doubt that these factors invited many sailors, who probably did not have corresponding advantages at home, to settle down in the new 'Land of Gold'. Thus, a new Indianised culture appeared in the coastal belt. Later it advanced along the rivers and valleys to the interior. The aborginies who could not or would not absorb these changes either migrated to the mountains or to the inner Pacific islands. Here many such clans and tribes are identifiable even today. The ethnic stratification commenced by the early Indian settlers immensely assisted the succeeding waves of settlers. A fact to be noted is the readiness of Indian settlers to sever their environmental and

political connections with the motherland, while retaining their religious, ritual, cultural and spiritual contents. This approach set forth a two way traffic of real values which culminated in their fusion. In these respects the Chinese were very different, as they were ever trying to enforce their institutions, religion and language on the countries they had militarily subjugated.

THE EARLY INDIAN KINGDOMS—THEIR GROWTH AND DECAY

The Indianised states have left little historical materials. Their history is still in the process of being reconstructed from external evidence and archaeological findings. At present there are many gaps and unconfirmed information. A horizontal study in a chronological order has been attempted to bring out the extensiveness of Indian influence and also to highlight the interplay between these states.

FIRST CENTURY AD—THE BEGINNINGS

Funan (Thailand) had its administrative centre in the Mekong Delta. This country, at its apogee encompassed South Vietnam, Mekong basin, parts of Menam Valley and the Malay Peninsula. Its capital was Vyadhapura, which was in modern Cambodia, approximately 200 km from the sea. According to Indian legends, the kingdom was established about the first century AD by one Kaundima, who had received a spear from the son of Drona, the great Guru in Mahabharatha.

Many small Indianised states emerged in Malay during first century AD, particularly in the Isthmus of Kra. Two of them were Tambralinga and Takkola. None of these became a regional power, as they were overshadowed by more powerful states like Funan and Suvarnadwipa. The earlier Malay states acted more like staging posts.

SECOND AND THIRD CENTURIES—THE GROWTH

These centuries witnessed the steady growth of Indian states. The kings of Funan became more powerful, and steadily went on expanding their sway. They conquered Suvarnabhumi (Land of Gold) which was probably in Malaya. Their rulers had friendly relations with the rulers of coastal India, and the Chinese. With the latter they had a common border. Sanskrit was the court language. Importance was given to oceanic commerce. This prospered, particularly because of unsettled conditions along the land routes. Because of her control of the Straits of Malacca, Funan was in a very advantageous position. Silver and gold coins were in use.

The great country of Champa (Vietnam) emerged in history at about this time. It was located in the general area of Quang-nam, South of Hue in Vietnam. Champa had common borders with China in the North, and Funan in the South. Ancient Hindu and Buddhist relics have been

unearthed from this region. The kings of Champa claimed to be descendants of Bhṛigu; who is mentioned in Mahabharata. Many wars took place with China. Progressively the Sinicised Vietnamese gained the upper hand as contacts with India were difficult due to distance, and as the control of Malacca Straits often fell under enemies.

FOURTH TO SIXTH CENTURIES-THE GROWTH CONTINUES

During the middle of fourth century, a fugitive prince from India took shelter in Funan and finally became its king. There is a possibility that he was a Kushan prince, who may have been ousted by the all powerful Samudragupta about 357 AD. Connections with the Pallava kings of South India were also maintained.

In Champa, one of their kings, Bhadravarman, built a new capital on the present site of Tra-kieve. Many relics suggesting their origin to the Gupta period have been recovered from here. However, it stands to reason that the Chams absorbed only the weaker waves of Indianization, and even prevented these coming directly in contact with the Chinese. Only Buddhism penetrated further. The court cult was of Siva-Uma. The use of baked bricks was general. Amongst all the Indianized states, Champa was the most militant. This was probably due to its unenviable geographic location. The royal procession of Champa kings was on decorated elephants preceded by musicians with conches and other musical instruments, just as they were carried out in ancient India. Many other rituals of Indian origin were also widely practised. Sanskrit was the court language.

In Malay (Kedah) Hindu and Buddhist relics have been unearthed. One such Sanskrit text is concerning a successful performance of a long cruise by a junk master, from the Gulf of Siam. There is evidence that many Hindu rituals were followed, including cremation of the dead. The kings favoured typical Indian type of processions on elephants. Many Brahmins from India regularly visited the court. Buddhist monasteries were flourishing and they attracted many disciples.

We come across a South India originated dynasty in Varunadwipa (Borneo), King Mulavarman ruled over a great part of this island, particularly the river basins. Java is prominently mentioned in Ramayana, as Yavadvipa. This island features in certain Greek words as well. In the regions of Sunda Straits, evidence of ancient Indian settlement is available, particularly near the ports. Scholars feel that the River Chi Tarum, is probably named after Suchinram of South India. The kings observed Brahmanic rites. Mention is made of irrigation and other matters. In Suvarnadwipa (Sumatra) and even in the Celebes plenty of evidence of Indianization is available.

During this period Champs, taking advantage of the weakness of the central power in China undertook expeditions. But no lasting gains were

made. One of their kings Gangaraja, abdicated and settled down in India, suggesting princely connections between the countries. There is on record a king sending an armada of one hundred ships for a raid. The Chams fought the Tonkings as well. Finally, China captured their capital near Hue and took away five tons of gold. The edging of this country to the South started after this campaign. From then onwards, Champs had to experience very many attacks from China and Dai Viet.

Funan prospered during the early part of this period, thanks to her hold on the Malacca Straits. Their King, Jayavarman sent an embassy to the Chinese Emperor in 484 AD. Sivaism was the dominant faith. Funan was aggressive and demanded heavy payments from ships. In return, their safety was assured. Ship building activities received much impetus, and ocean going ships were built in large numbers. Kings and nobles used elephants on ceremonial occasions. King Jayavarma (sixth century AD) had good relations with the Chinese Emperors, who gave him the title "General of the Pacified South, King of Funan". Towards the end of this period, Vishnavites and Buddhists appeared to have gained a lead. Rudravarman was the last king of Funan. As we shall see, Funan began to decline rapidly, and gave rise to the pre-Angkorian Cambodia, under Khmers. It is of interest to note that no SE Asian country managed to consolidate as much territory as Funan did up to date.

SIXTH AND SEVENTH CENTURY AD—BIRTH OF NEW STATES

The successors of Rudravarman were weak, and they could not hold Funan together. The Viceroys rebelled, and one of them, Chitrassena proclaimed his independence, and even waged war against Funan's homeland, towards the middle of sixth century. This was the beginning of the State of the Cambodia, which in ancient times was known by Chenla. These internecine wars were partly due to Buddhists hold of Funan. The Chenlas were staunch Hindus, claiming their ancestorship to the Kambajas. The Chenla dynasty strengthened its position by political marriages, and judicious conquests until it virtually took over the greater portion of Funan proper. Their capital, Bhavapura was located to the north of Lake Tonle Sap. This formation of Chenla was completed by about 600 AD.

While Funan was breaking up and Cambodia was emerging, the Champan were engaged in unsuccessful hostilities against the Chinese. In 605 AD, the Chinese sacked their capital city. However, the Champan tried to maintain friendlier relations with Chenla.

King Bhavavarman of Cambodia was the builder of the capital city named after him. By the middle of seventh century, Cambodia under the Khmer kings had attained complete integration. This was the most powerful state in the region. King Jayavarma died without any heir.

towards the beginning of eighth century. There is evidence of close relationship with India of the contemporary period. Sanskrit continued as the court language. The Sivite sect of Pasupatas and the Vishnavites of Pancharattras were flourishing, and they were instrumental for the formulation of the Angkor culture at a later period. The kings and nobles followed matriarchal system, as the Nayars of South India. The rituals practised in the courts and houses were remarkably like those in vogue in India. There could be no doubt of very close contacts with South India during this period.

SEVENTH TO NINTH CENTURY AD—BIRTH OF A NEW NAVAL POWER

The disintegration of Funan let loose a lot of independent forces, in the Malacca Strait region. The fast rise of Srivijaya kingdom in Sumatra was certainly due to this. We have evidence of wars between Sumatra and Java, towards the middle of Seventh century. There are detailed accounts of the troops moving by land and sea. These countries had direct contacts with China and India. Srivijaya, in course of time, controlled the Malacca and Sunda Straits, and exercised a powerful hold on the movement of all ships. She was easily the most powerful naval power of this region in those days.

Towards the beginning of the eighth century, Chenla was divided into two a process which became inevitable, as the central power of the king diminished.

In Java, King Srivijaya became very powerful and consolidated the island, but he could not match Srivijaya of Sumatra. It is noteworthy that the Hindu Sage Agastya was much venerated in the name of Bhatara Guru. Towards the end of eighth century, the Soilendras (Kings of the Mountain) exercised power over the whole of Java. They assumed the title of Maharaja and patronised Mahayana Buddhism. It is possible that they provided a focal point for the concentration of all Buddhists who were being forced out by the Khmers. We know that Hinduism remained equally powerful, and strong contacts existed with Bengal. The Buddhist University of Nalanda was patronised by the Silendras. These kings built the magnificent Buddhist monuments in the Kely Plain. The Silendras staged an unsuccessful attack on Indo-China (Champa) in 767 AD. The importance of the event is that it illustrates the extent to which sea borne invasions were attempted those days. The indefatigable Silendras managed to exercise some hold even over Chenla for a short period.

During this period, Chenla received further political setbacks. In Champa, there was further forced migration to the South, and a new capital, Panduranga (showing affinity with the Tamils) was built. Behind this forceful expulsion, the hands of China could be seen. Indianization was steadily losing ground.

The kingdom of Angkor came into being when Jayavarman II of Cambodia shook off the overlordship of Java at about 800 AD. He assumed the title Devaraja (God King) and was ably assisted by his Brahmin adviser Sivakaivalya. He established many cities, particularly in the area of Lake Tonle Sap. Their art was pre-Angkorian in character and was also its progenitor. The king was a Sivaite. The Tantrics of India also found favour under him. Jayavarman II undertook many campaigns and consolidated Cambodia. He died in 850, after ruling for 48 years and was defined as Parameswara, after his death.

EVENTS UNTIL ELEVENTH CENTURY—A NEW LEASE OF POLITICAL POWER

Towards the end of ninth century, traditional Brahmanism was well established in Angkor. There is on record of the disciples of Shri Sankara, the noted advaitic philosopher of India staying in the court. The Angkor kings were great builders and patrons of art and culture. In some of their creations, the earlier edition of Angkor Thara, which was probably built in the twelfth century, could be seen. They took great interest in digging lakes—may be for promoting agriculture and fishing. Sivaism was the state religion. Inter-marriages amongst princes of various principalities were a common feature, as was in India. However, it is surprising that we have not yet come across any record of such marriages taking place with any reigning Indian dynasty. Religious tolerance was practised. The Khmer monuments are mostly of a religious type. Finally, it may be noted that the prosperity of Cambodia during this period was indirectly due to the political and military weakness of China.

During this period, Champa continued to remain a sovereign state with declining Indian traditions. Moreover, the contacts with India were progressively getting weaker, and the Vietnamese and Chinese influences were gaining upper hand. The reasons for cooling off of relations with India are not clear. It is highly probable that the missionary spirit of contemporary Indians was weaker, and that they were satiated by the comparatively warmer welcome given to them by the Silendras, Srivijay and Khmers. Anyway, we see marked recession of contacts between Champa and India from eleventh century.

Towards the latter half of ninth century, the Buddhist Sailendras of Java began to decline, probably in the face of Hindu revival. In Eastern Java, a new state by the name of Malasam came into being. It followed Sivaite rituals, though Buddhism was well tolerated. We hear of the city of Jayakarta for the first time during this period. Of considerable importance is the compilation of Javanese Ramayana during this period. The island of Bali came under Indian influence at this time. This country was not friendly with Srivijaya. This eventually led to wars and the temporary eclipse of the Javanese power.

The Sumatran Kingdom of Srivijaya retained its naval supremacy. It centred its power on well protected natural ports, which had safe anchorages. For safeguarding the ports, the Srivijayas had to undertake many Naval operations. By now, apart from Indian, Arab and Persian merchants had also established contacts and much profit and prosperity resulted. The title of Maharaja was continued, even though these kings ruled over very many islands and principalities. The people became more materialistic consequent to their very profitable trade, and religion was pushed back. They were unfriendly with Java most of the time, which resulted in the weakening of both the countries over a period of time. The failure to foresee the magnitude of the oncoming danger and taking suitable steps to meet it, finally resulted in the eclipse of both the countries.

ELEVENTH CENTURY—DECLINE IN THE EAST

A number of civil wars occurred in Cambodia during the first decade of eleventh century. Out of these, Suryavarman I came out as the victor, and ruled the country for 48 years. He was champion of Buddhism. However, he elected to remain as the Hindu Devaraja as well, thereby showing a measure of religious synthesis. He was a builder of many temples. The Khmers fearing an attack by Srivijaya, solicited the help of the great Chola King of India, Rajendrachola I. The Chola King launched an expedition against Sumatra in 1020 AD. After this, the Khmers faced no major external threat for some time, though various factions fought against each other, after the demise of Suryavarman I. This was inevitable, when the line of succession was either doubtful or weak.

The Indianized Kingdom of Champa lost its hold of all the Northern provinces against strong Chinese pressure. In 1044, a maritime expedition was launched by Dai Viet, against Champa which resulted in the latter's defeat and the decapitation of its king. The new Champa king tried to make peace with his enemies ; in spite of this, steady erosion of sovereignty continued. In 1068, war again broke out with Dai Viet. The Champa king was defeated a second time and the capital was burnt. The king was taken prisoner. He agreed to surrender a portion of his country for his freedom. This was the beginning of the end of Champa.

Srivijaya continued to maintain good relations with China. To cultivate the favours of the Chola kings of Tanjore, Srivijaya built a temple at Nagapatnam in India. Such tactful policies helped Srivijaya to secure a foot hold even on the Malayan Peninsula. An inscription described the king as "descendant of the Silendra family, king of Srivijaya and Katahe (Kedah)". But Srivijaya was against Silendra of Java. This brought them against Cholas as well. King Rajendra I of Tanjore fitted out a naval expedition and raided many islands from 1047. In 1025 Rajendra Chola temporarily occupied many parts of Malaya, Andaman

and Nicobar, and finally portions of even Sumatra. The capital city of Srivijaya, Palembang was taken and the king was captured. However, the Cholas did not attempt any lasting occupation, and in the event a subdued Srivijaya emerged at the end of the conflict.

In Java, King Airlanga succeeded to consolidate his country, after the Srivijaya debacle of 1025. He very successfully established commercial links with Kalinga (E. India), North India, Bengal, Ceylon, the Cholas and many others. He was a staunch Vishnavite.

TWELFTH CENTURY—GENERAL DECLINE

During this period, China was instigating trouble in SE Asia, and both Cambodia and Champa got involved in a war against Tonking. However, no lasting results came out of it. In Cambodia, Jayavarma II won many victories for Khmers. He waged successful wars against Champa. In 1128, he led a force of 20,000 against Dai Viet. This was followed by a fleet action consisting of 700 ships. However, Dai Viet soon rallied and reasserted their independence.

Amidst all her difficulties, the dismembered Champa continued to exist, placating their enemies by various stratagems. Dai Viet did not feel strong enough to absorb Champa, in the face of the hostility of Khmers. It was left to Khmars to strike the final blow.

THIRTEENTH CENTURY—THE GLOW BEFORE THE END

Under Jayavarma VII, Cambodia reached new heights of fame and grandeur. He made peace with Dai Viet and waged war against Champa in 1190. The Champa king Jaya Indravarman was routed and their new capital Vijaya was occupied. The Champa king was dethroned, the kingdom was divided and new kings were put on the thrones. Until about 1220, Champa remained a Khmer province, though insurrections went on. Jayavarma VII extended his kingdom to the North and West as well. Buddhism was the Royal faith—though there was still powerful Brahminic influence at the court. The Angkor Thar, a beautiful work of architecture with magnificent walls, moats and gateway and the Bajon was built. He also constructed many roads, rest houses, hospitals and staging posts to consolidate his hold. However, constant wars had made the country bankrupt and intrinsically weak, apart from creating many enemies.

The break-up of Srivijaya started as early as 1178, when we notice the state of Malaya (Jambi) assuming great prominence. The combined strength of these island states continued to dominate on the region for some more time.

After the death of Jayavarma VII, Cambodia began to steadily lose its prominence. They had to evacuate Champa, Thai and other places,

but retained their hold in Menam Basin, and Malaya Peninsula. It may be noted that the factional wars between Khmers and Champa lasted over a century, weakening both the countries, and opening them for Sinicized Vietnamese influence, subsequently.

Independence and peace did not last long with Champa after their liberation from Khmers. Dai Viet attacked them as soon as they sensed the weakness of Khmers. The Cham King Jaya Parameswaravarman had to surrender three provinces to Dai Viet.

Srivijaya continued as a naval power, holding sway over fifteen vassal states—in Malaya and Western Indonesia. Their strength emerged from their firm hold of both sides of the Malacca Strait. There are many anecdotes of Srivijaya's long and glorious naval activities. At the height of their power, they guaranteed safe passage to all nationalities. But as weakness set in, a certain amount of piracy occurred. About 1220, Srivijaya intervened in Ceylon in a war of succession. In these the Pandyas of S. India also took sides. Finally, Srivijaya's end came when Java re-emerged as an independent power and started to control the Sunda Strait.

Towards the middle of thirteenth century, a new dynasty in Java managed to reunite the erstwhile kingdom of Airlanga. The new ruler adopted the title of Silendra Kings, though he could not have been one of their descendants. Great events were taking place in Asia and Europe. The Mongols conquered most of Eurasia. In 1200 Kublai Khan ascended the throne of China and founded the Yuan dynasty. Indirectly this favoured the growth of Thai power, who expanded to Menam Basin and parts of Burma. However, all these developments adversely affected the Indianised Kingdoms in this region.

The Khmers of Cambodia made peace with China by paying tribute. But the Thai Chiefs combined in the face of the changed political and military situation and liberated Sukkothai from Cambodia. The Thai court rituals and pattern of administration came under the influence of the Chinese.

In the meantime, Champa was invaded by the Mongols. A long and costly war followed, at the end of which the invaders withdrew. But it further weakened Champa which was already threatened with the possibility of dismemberment by Dai Viet.

The Javanese made further expansion at the expense of Srivijaya. King Kritanayara annexed Bali in 1284. Later he fell out with the Mongols, who sent an expedition against him in 1292. This eventually resulted in the eclipse of Java and the setting up of Majapahit as an independent kingdom. Later the Chinese were forced to leave the island by the new king Vijaya. But for many years the internal revolts continued.

The ascendancy of Java over Sumatra remained, though in a reduced measure. When Marco Polo visited the island of Sumatra in 1281, Islam had already gained a foot hold. Thus we see the great Srivijaya Empire coming to an end, by the slow and steady oersion of power.

About this time, the Thais gained further strength at the expense of her neighbour, Sukkothai became more prosperous and the city of Chingmai was founded. Even today this beautiful city is out shined only by Bangkok in Thailand.

Cambodia lost more territories and international power came to be shared equally between Brahmins and Buddhists.

FOURTEENTH CENTURY—DECLINE OF THE INDIANISED STATES

By now, Hindu and Sanskritic Indian states were under the erosive process of Islam. Then contacts with home country became weaker and even purposeless. For, the Muslim invaders of India were involved in large conquests. After consolidation the Muslims were looking towards the West for their power. SE Asia began to recede from India's vision, and sphere of influence. With that the fate of Indianised kingdom was also sealed. This process was accentuated by the Thai rise to power and the founding of Laos. Until 1539 Thais ruled over Borneo and portions of Malay.

At the beginning of the fourteenth century, King Srindravarma was reigning at Angkor, as the king of Cambodia. After his death, Thai attacked the country. The last Indianised king was Jayavarmadiparameswara, who is mentioned in the inscriptions of Angkor Wat. It is of interest to note in passing that Bakois, the court Brahmins, even today play a part in the royal court of Cambodia.

The kingdom of Champa collapsed at about 1360 under the incessant attacks of Dai Viet.

While Cambodia and Champa fell before the continental powers of Asia, Malay, Sumatra and Java fell to Islam. Sultan Mohamed Bin Toghluk sent Ibn Batuta to China about 1345. He speaks of a Muslim Sultan ruling in Malaya. We know that Islam came in force to Sumatra about 1281 probably from Gujarat. With religious fervour, and more modern weapon technology, Islam spread fairly rapidly. The Majapahit kingdom carried on for another century. But the end could not be averted as Islam was well established all around and no new military or cultural Indian reinforcements were forthcoming. After the middle of sixteenth century, the original Indian culture could be seen only in Bali. A new danger to the independence of all Asiatic countries had already arrived, when Vasco de Gama sailed into the Indian Ocean, and Alfonso de Albuquerque stormed Malcca on 10th Aug. 1511. No one at that time realised about the intensity and magnitude of these epoch making events.

CONCLUSION

There are still many gaps in the ancient history of SE Asia. Even what little is known has been reconstructed from diverse source, with judicious interpretations. It is abundantly clear that until fourteenth century, India had very close and abiding contracts with these countries. It is pertinent that political colonising was not attempted by Indian genius even when militant Gujarat and Chola kingdoms carried out very strong naval raids. Throughout the emphasis had been on religion, art, culture and commerce. There could be no doubt that Hinduism and Buddhism vived with each other for mastery. This competition could have been one of the main compulsions, if not the *raison detre* itself, of India's sustained interest. Hinduism made impact on the elite, but the masses were not motivated, though various social customs and habits found their way for general acceptance. Sanskrit and Tamil made definite contributions to local languages, while India's pattern of administration, judiciary and panchayats were also adopted. The Brahminical hierarchy appears to have got involved in arguments about the superiority of Vishnu and Siva culture. The religious and political convulsions of India invariably got transported to these countries. This factor alone is sufficient to prove beyond doubt the closeness and constancy of India's contacts. On the whole, Buddhism appealed better to the lower classes.

Compared to the above, China's interests and activities were on an entirely different plane. The Chinese considered the people of SE Asia as 'barbarians'—just like any other non-Chinese. Whenever the Central Government of China was strong, military expeditions were sent to subjugate the 'barbarians'. The earliest on record is the wars undertaken by the Han Dynasty in Tonking about 100 AD. From about second century BC, Buddhism came to China through these countries. Both Confucianism and Taoism resisted Buddhism, and gave an additional reason to attack the 'barbarians'. From second century AD for about three and a half centuries, China was divided into three Kingdoms, and the Central Government was practically non-functional. It was during this period that Funan and other SE countries enjoyed an era of peace and prosperity. But Tang Dynasty unified China about 618 AD. Then wars broke out again not only in SE Asia, but also at the Indian borders as well. Similar experience occurred in thirteenth century when Yuan Dynasty (The Mongols) came to power, and also later when they were succeeded by the most famous of them all, the Mings. The historical imperial policy of China has always been to assert her social and cultural superiority by the use of force, whenever she was in a position to do so.

A word about the prowess of Indian navigators would not be out of place. They were amongst the most ancient sailors to take successfully to oceanic sailing. Apart from mythology and legends, we have indisputable historical evidence of great armadas consisting of well over a hundred ships making long voyages, from about third century BC, until twelfth century AD. It is a tragic mystery as to how this great naval tradition was all but destroyed and buried by the Portugese and the English. The thoroughness with which these colonial powers did this nefarious business leaves one in no doubt that it was their official policy to do so. The British policy was not to entertain any challenges or competitions on naval matters. Indeed, they carried out this plan with conspicuous success though unscrupulously.

The ancient Indian voyages to SE Asian states had a big content of man's search for adventure and establishment of fellow communities. The kinship community of the Vedic period gave way by about 1,000 BC to a socio-political set up under a king. It was such a socio-religious philosophy which India exported to SE Asia. In spite of their regular contacts with India, the foreign countries felt the need for new kinships in an increasing manner as time went. This urge made the Indianised elite to progressively depend more upon local people, many of whom were Buddhists, Malays, or Vietnamese. Thus, new mixed families, ethnic bonds and even religious belief grew up. When the time came to sever ties with India, there was no difficulty to achieve complete fusion with local population. Indeed, the resultant ethnic bondage has very well stood up against all kinds of challenges over a very long period of time. But this happy social outcome should not prevent one from commenting on the obvious—that social stagnation took place in this region. Except in art, we have little evidence of much creative or original work. It is unfortunate that even the friction between Hinduism and Buddhism was insufficient to generate the required heat. It might have been due to the comparative prosperity of the middle class, which resulted in an attitude of contentment. These drawbacks resulted in the elitists of these countries looking inward, and not correctly appreciating the political and technological developments which were constantly taking place at other places.

Finally, we see little evidence of any regional or political attempts emerging amongst these countries to unitedly face foreign aggression at any time. The nearest approach to unity was achieved when Funan and Srivijaya were at their apogee of power. The threat from China was real; but this did not materialise in a sustained manner because of extraneous reasons. These countries went on placating China individually, and no collective security arrangements ever emerged. Perhaps this was inevitable; for India herself suffered from such a grave shortcoming, after the break up of Harsha's Empire. What is now of greater pertinence is, whether these lessons of history would be taken note of by the present generation of the countries in SE Asia.

THE FUTURE TRENDS IN WEAPONS AND TACTICS

MAJOR MS SEKHON, ENGINEERS

*"...Each Age that is, is dying,
Or one that is coming to birth..."*

THE Art of War, tactical concepts, are subject to change, the change arising from rapidly improving technologies. In the past technological improvements in weapons have caused not just changes but the evolution of totally new tactical concepts and doctrine. Witness the discontinuity in tactical concepts and practice brought about when the machine gun entered general service in World War I. In more recent times, the Atom Bomb was not just an increase in performance over conventional chemical high explosive, but a jump in destructive quantum so great as to invalidate all tactical concepts then current. The aim of this paper is to examine trends in weapon technology with a view to identifying those areas in present tactical concepts and doctrine where discontinuities are likely in the future.

THE TACTICAL MILITARY ENVIRONMENT

In this environment of rapid technological change, performance requirements of future weapons cannot be projected from an examination of current doctrine, as that doctrine itself may become invalid when the equipment now under development comes into service. If today's tank has, say, insufficient protection then tomorrow's tank with better armour would be an improvement no doubt, but is it the weapon for tomorrow's battlefield.

Projections for the future must necessarily be based on assumptions that will remain valid when the projected equipment comes into service. What is needed is a generalised conceptual model of the battlefield which will be valid regardless of the sophistication of the weapon system being employed in the future. Such an inter-relationship between adversaries on a battlefield is what this author calls the Tactical Military Environment.

The Tactical Military Environment is the three stage process by which adversaries on a battlefield seek to destroy each other. The three stages are :—

- (a) Target Acquisition, including detection and identification.
- (b) Tracking and guidance.
- (c) Destruction.

In simple words for a target to be successfully engaged on a battlefield, it must be first spotted and recognised, then shot at accurately, and lastly hit with sufficient force or energy to destroy it.

This sequential process is valid even when a primitive tribal engages an enemy with a bow and arrow, or a spear. It is valid equally when an anti-tank gun crew engages a tank, and as well when a fully automated nationwide air defence system picks up, engages and destroys an intruding hostile aircraft. This conceptual model is independent therefore of the level of sophistication of the weapon system being employed.

THE SYSTEM IN OPERATION

In any battlefield situation for successful engagement of a target ALL three stages—Target Acquisition, Tracking/Guidance, and Destruction must be completed. To illustrate, consider a simple battlefield situation of a tank being engaged by an anti-tank gun crew. For success the following conditions must all be fulfilled :—

- (a) The tank must be spotted and recognised as an enemy tank by the anti-tank gun crew.
- (b) The tank must be shot at accurately with the correct elevation/lead considering the speed, range, and direction of move of the tank.
- (c) The tank must be hit with the ammunition of the right type and energy so as to go through the protection afforded by the thickness, shape or type of the armour on the tank.

Also in this very same engagement, for the tank to avoid destruction it could take any one of the following measures :—

- (a) Avoid detection by being camouflaged, or by simply being hidden, or
- (b) Having been spotted take evasive action so as to confound the ability of the anti-tank gun crew to judge distance, and compute lead/elevation correctly, or
- (c) Despite having been spotted and shot at accurately, avoid destruction by virtue of the protection afforded by the armour.

Note Since this is only a one way conceptual model, the course open to the tank of taking retaliatory action against the anti-tank gun crew is not being considered yet.

CHARACTERISTICS COMMON TARGETS

	Protection	Mobility/Evasive Ability	Signature Value
Individual Infantryman	Unarmoured, at best has nylon body armor	<ol style="list-style-type: none"> 1. Mobility from muscle power 2. Earthbound 3. Slow speed 	Has a very low signature value profile. This can be reduced further in a danger situation, e.g., digging in.
Armoured Fighting Vehicle	Armoured	<ol style="list-style-type: none"> 1. Mechanical power 2. Capable of fast move 3. Earthbound, however can move cross country 	<ol style="list-style-type: none"> 1. Has a fairly high signature value profile. 2. Operates against a low contrast background.
Tactical Support Helicopter	Unarmoured, at best the power plant and pilot have shrapnel protection	<ol style="list-style-type: none"> 1. Mechanical power 2. Capable of very high speed move 3. Has three dimensional mobility 	<ol style="list-style-type: none"> 1. Has a high signature value profile. 2. Operates against a high contrast background.

This conceptual model of the Tactical Military Environment enables us to define a target in terms of its physical parameters, characteristics which determine the vulnerability or otherwise of a target in any battlefield environment.

DEFINING TARGET CHARACTERISTICS

The three facets of the definition of a target on the basis of this model are :—

- (a) *The Signature Value of a Target, or its Profile.* Those physical parameters which cause a target to be spotted and recognised.
Examples are :—shape, sound, heat, gun flash, radar image, and even smell.
- (b) *Evasion Ability.* The speed and manoeuvrability of a target which enables it to confound lead/elevation computation, or even the tracking and guidance of a missile fired at it.
- (c) *Protection.* The characteristic that enables a target to survive a successful hit.

In any modern battlefield there are three basic types of targets, each of which is described in the chart opposite in accordance with the model just evolved.

- (a) The Individual Infantryman,
- (b) The Armoured Fighting Vehicle, and
- (c) The Tactical Support Aircraft, generally a helicopter, could be command/observation/fire support.

ASSESSING WEAPON SYSTEMS

This conceptual model of the Tactical Military Environment not only enables us to define a target on a battlefield as has been done, but it also enables us to evaluate the effectiveness of any weapon system to engage a target of any particular definition. Thus a weapon system can be evaluated at each stage of the three stage process of target engagement to assess if the technology employed for target acquisition, for target tracking, and for final destruction of the target are such as to be effective against the type of target being engaged.

THE FORESEEABLE FUTURE

The armament technology of today is based on the discoveries of a few years ago. There is a considerable period of gestation before any laboratory discovery is developed sufficiently to be available as a new technology. This time taken to develop a laboratory discovery into available technology is what limits or roughly defines the *Foreseeable Future*. The effectiveness of the weapon systems of tomorrow will depend on the technologies employed by them to complete the sequence of target engagement, i.e., acquisition, tracking and destruction. In such a context

looking into the future for developments in tactical equipment and concepts is not mere crystal gazing, but a rational projection of foreseeable trends based on the possible technologies of tomorrow now in a nascent or incipient stage.

THE AREAS OF DISCONTINUITY

The effectiveness of a weapon system, or the vulnerability of a target govern their inter-relationship on a battlefield, namely, tactical concepts. In the context of *Non-Nuclear Land Warfare*, an examination of this relationship of target and weapon system of the future, along the lines outlined earlier, will reveal those areas in current tactical doctrine where discontinuities are likely in the future.

TARGET PROTECTION VERSUS WEAPON SYSTEM DESTRUCTIVE ENERGY

The best protected target on today's battlefield is the tank. Present practice in protection involves the use of steel armour plating, the amount of protection afforded being proportional to the thickness of armour plating. Weight considerations place an upper limit on the armour plate thickness of a tank, current practice being to protect the more vulnerable parts of a tank with greater armour. In present day tanks the heaviest armour at the most vital and vulnerable parts is around 600 mm thickness.

While in earlier weapon systems the destructive effect was achieved primarily from kinetic energy, modern weapons designed for use against armoured targets, in almost all cases, rely on the chemical energy of explosives. In recent years this technology has made rapid strides with the use of shaped charges and other improvements which together, give even hand-held weapons (under 15 Kg weapon plus ammunition weight) the energy to penetrate the heaviest known armour.

Improvements in the technology of armour protection are also being made. Experimental models of tanks employing armour of multiple walls of spaced reinforced lightweight synthetic material have been produced in some countries. These efforts, however, are directed towards weightsaving, an area where they are remarkably successful. These experimental efforts do not aim to, nor do they, give any positive protection against the successful hit of any serious anti-tank weapon.

Given the state of art in this field as at present, and with no indication of any technological break through on even distant horizons, it is safe to conclude that presently, and in the foreseeable future a successful hit by even handheld weapons can destroy the heaviest armoured targets on any battlefield.

TARGET EVASIVE ABILITY VERSUS WEAPON SYSTEM GUIDANCE

The balance between target evasive ability and weapon system guidance is best studied from the point of view of the weapon system.

An ideal guidance system would have the following characteristics :—

- (a) Automatic and Instantaneous Detection of Error in the delivery course.
- (b) Instantaneous computation of corrective action to be applied.
- (c) A reliable and a non jammable command link to convey the computed corrective signal.
- (d) Rapid response of the missile to the applied correction to course.

Automatic and Instantaneous Detection of Error is not presently possible except in the case of Air Defence systems designed to operate against high level aircraft. For a system to have such a capability will depend on the ease with which it can pick up a target and automatically identify it. This will depend on the signature value of the target and will therefore be discussed in the next phase while comparing surveillance systems for various target signature values.

The ability of a target to prevent a successful hit in this phase of engagement will therefore depend on :—

- (a) Jamming/cutting off or otherwise rendering non-effective the weapon system command link.
- (b) Such fast evasive action by the target as to outdo the course-correction action of the hostile missile under delivery.

The jamming of wire guidance command links is not presently possible. Even the highly directional microwave or laser command links employed by some systems are very difficult to render non-effective (Some have an additional safeguard of rapid frequency shift.)

As far as evasive action is concerned mission accomplishment requirements place certain limitations on the target. Limitations such as a theoretical top limit speed to enable observation to be carried out. Also each target needs to expose itself to enemy weapons for a certain minimum time in order to carry out its own battlefield role. The other factor is inertia. All targets, whether tanks, aircraft, or infantry have a much greater mass or inertia than the weapon (or missile) designed for use against it. A bullet is capable of far faster movement than an infantryman. A missile similarly can accelerate, or alter course far easier and faster than can a tank or an aircraft. Thus evasive action to outdo guidance commands is extremely difficult if not already impossible.

An examination of the present state of art in weapon guidance technology reveals that wherever automatic detection of error is possible (such as presently in most high level and some low level air defence systems) a successful hit is almost always ensured. The evasive ability of a target, normally a high inertia object, cannot match the corrective manoeuvre-

ability of a guided weapon system, where the missile is a comparatively low inertia object capable of higher acceleration.

WEAPON SYSTEM TARGET ACQUISITION ABILITY VERSUS TARGET SIGNATURE VALUE

Surveillance devices are available which work on all manners of physical properties:—magnetic, acoustic, seismic, radar image infrared reflection or heat image, and even smell. For automatic identification, the "surveillance prints" of a target must have a characteristic and a sharp contrast from the "prints" of the background against which the target operates. This contrast has to be in terms of whatever physical property is being employed in the surveillance device.

A few years ago only high flying aircrafts were vulnerable to automatic identification by surveillance (and tracking) radar. With improvement in radar technology, today even low flying aircrafts are automatically identified as a target (hostile) although at considerably reduced range, nevertheless sufficiently early to permit engagement of low flying aircrafts by automatic local air defence systems.

The Viet-Nam conflict gave a tremendous impetus to the technology of battlefield surveillance at a lower horizon. In order to reduce the exposure of the highly "expensive" military manpower of the US forces from dangerous perimeter surveillance duties, several "stand-off" devices were developed and introduced whereby the "sentry" need not monitor the perimeter from a forward trench.

Sensitive seismic devices that could detect an infantryman's footstep, olfactory devices that could smell a perspiring enemy outside the perimeter, Doppler radar to continuously scan the perimeter for movement. All these devices were developed for use against the elusive low profile Viet Cong.

These devices are however not automatic. The decision to identify an indication on the device as an enemy triggered signal has to be that of the human mind on monitor duties. This is because the background against which these targets moved was a low contrast one compared to the target to be spotted. The surveillance print of the object under surveillance and the background is so similar that human judgement is required to identify a signal as being representative of a target.

Development work in this field of automatic target acquisition is now directed along two lines :—

(a) *Greater Resolution.* Attempts are being made to obtain a sharper image. Thus efforts are being directed, to obtain say a thermal image which is not just a blob on a screen but a shape closely approximating the object under observation.

(b) *Multi-Mode Detection and Identification.* The use of more than

one physical property to identify an object under surveillance. With several such cross checks available and with possibly better prints from each such process, human judgement may no longer be necessary to identify such an object.

An evaluation of the state of art in surveillance technology reveals that this stage is the weakest link in the three stage process of target engagement. Survival in a battlefield environment will depend largely on having so low a signature value profile as to escape detection by the enemy's automatic target acquisition systems.

FUTURE TRENDS

The weapon systems of today are almost perfect for their purpose. The only way a target can ensure survival on a battlefield of the future is to have so low a profile as to avoid identification, especially by automatic surveillance and target acquisition systems. The Yom Kippur War of 1973 proves that the tactical fighter bomber flying either high or low has been rendered almost obsolete by well coordinated local air defence systems.

Automatic surveillance for, and identification of AFVs is the next logical step from the technologies developed in Viet-Nam. Minaturisation of guidance systems, the effectiveness of weapon destructive energy against all types of armour have placed in the hands of the individual infantryman the power to engage any tank.

Retaliatory action, such as suppressive or even speculative fire, is a well tried and so far an often successful defensive measure adopted by tanks against missile equipped infantry. With the introduction of second generation anti-tank missiles, such measures are far less likely to succeed.* Offensive weapons, such as the tank or the MICV or the gunship helicopter, necessarily have a greater bulk, a higher signature value. For reasons discussed earlier their survivability on an active battlefield of the future is seriously in question.

With the immobilisation of offensive weapons such as conventional 'tanks' non-nuclear land warfare seems about to enter an impasse in favour of defence, similar to the impasse caused by barbed wire and the machine gun in World War I.

The Infantryman, becomes no longer, a lowly weapon carrier. He is the operator of a sophisticated weapon system and his survivability is

*The older missiles such as ENTAC, SSII and the SAGGER had a slow flight speed to enable manual control by the missile pilot. Thus the period of engagement of a target by such missiles extended upto 10 secs for targets at 1000 m range. This made the missile pilot vulnerable to suppressive fire by the tank once a missile was spotted in flight. The newer missiles such as the DRAGON, HOT, or MILAN have semi-automatic guidance, and hence a much faster speed in flight. The period of engagement of a target at 1000 m is less than 3 seconds, which is too short for the tank crew to spot a missile in flight and then engage possible pilot positions.

derived from his low signature value profile. His indispensability on a battlefield of the future is the need for him to make the decision of target identification where surveillance devices have to pick targets against a low contrast background. The larger, bulkier components of a weapon system would be located outside and behind the immediate front of a battlefield. An extension one might say of the 'SMART' Bomb technology.

RECOMMENDATIONS

The battlefield of the future will belong to the Infantryman. Our weapon systems therefore must be designed to increase his effectiveness, without compromising his survivability.

The tanks of the future will continue to be mobile gun platforms, but since their employment forward would be restricted for the reasons earlier stated, there will be less need for as much armour. The resultant reduction in weight, will enable the tank to increase its mobility for rapid re-deployment. Of course the distinction from self-propelled artillery will narrow or almost disappear.

An MICV by its bulk and high signature value, compromises the survivability of the Infantryman. Infantry is truly infantry when it retains the ability to go to ground. The ability to assume a low profile suited to the exceptional danger situation of a battlefield once it becomes active.

The Infantry needs, however, a means to increase mobility for rapid re-deployment. The Infantry need is thus for a "battle taxi". Such a vehicle would be truly mobile for it will be free from the constraints of being "a poor man's tank" as is the case with present generation MICV. Its characteristics would be :—

- (a) Protection just sufficient against shell splinters and small arms.
- (b) Armament limited to a single multi-role (ground and air) machine gun of around 0.50 in calibre which should be lightweight and dismountable.
- (c) Mobility such that no restrictions are imposed by terrain other than where strong artificial obstacles exist.

It is perhaps fitting that as human resources become more expensive, as they are bound to in the future, the balance of success in a conflict too will rest with an arm which is basically oriented towards the man as against the machine or the weapon—the till now, lowly infantry. It is imperative therefore that while maximum efforts must be made to provide the infantryman with a greater fire power of greater accuracy, no such measures, either in organisation or in equipment should compromise his survivability on the battlefield.

The infantry carrier should thus be designed for a small sub-unit, maximum a section, preferably a half section. It should provide for almost

instantaneous dismounting or mounting to facilitate rapid re-deployment. A small sub-unit carrier with limited armour protection, and armament restricted to a dismountable machine gun, will permit the design to achieve a highly mobile vehicle with a desirable low visual profile. A small sub-unit carrier will not only risk less of valuable manpower, but also lead to a greater flexibility in deployment.

Tactical Concepts : A defence biased approach has, in most armies long been considered to be synonymous with a defeatist outlook. However the fact is that with immobilisation of conventional offensive weapons such as the tactical fighter bomber and the AFV, war is moving towards an impasse in favour of defence. Of course, this impasse in favour of defence is not necessarily of a permanent nature.

Military thinkers as disparate as Clausewitz and Mao have conceded that defence is the "stronger" form of war, for it can be waged with lesser strength, and with lesser losses in casualties. Victory through defence is very much a possibility, though, of course, a defensive battle lacks the élan of a mobile offensive war carried into the enemy's territory. In an environment which favours defence, success is more likely for the side which seeks to strengthen its capability to wage a defensive as opposed to an offensive war.

Tactics is the servant of strategy. It is perhaps fortunate that in an age where the professed military strategy of most nations is non-aggressive (or defensive) the tactical environment too should favour such a course.

Military establishments—trained men, equipment and installations—represent a huge investment in capital. It is vital that such an investment be not made in equipment likely to be rendered obsolete by the course of events.

Brig Bidwell, in an editorial article in the Royal United Service Institute Journal, has called attention to this trend in weapon evolution favouring defence. NATO strategists now consider the overwhelming numerical superiority of the Warsaw Pact armoured forces not as a source of serious danger but as representative of a vast amount of capital locked in equipment already obsolescent.

We too in India, need to reallocate our limited resources towards procuring the right equipment and weapons for the future. Equipment that will increase the effectiveness of the Infantryman without compromising his survivability. We urgently need surveillance devices, and at a generous scale—battlefield radar, infra-red sensors, night vision devices. Also required are items such as hand held laser navigation and range finding devices, and vastly improved communications. Technologically we are at the threshold of achieving indigenous production in such items should the requisite financial investment be made. Financially we can create these required resources by paring down and eventually eliminating our investment in such equipment as has become obsolete, equipment such as medium tanks, MICVs, and conventional ground attack fighter bombers,

A PLEA FOR NATIONAL HOME GUARDS

LIEUT COLONEL MC GAUTAM

IN our society riddled with complex socio-economic problems, desirability of people's objective participation in government activities like maintenance of law and order, developmental projects, relief operations, civic education and social uplift in any democratic set-up cannot be denied and ignored. The aspect assumes importance in large democracies where direct participation of the people with the government is not possible. Closer association of the administered with administration will have salutary effect in ensuring a clean public life. The mode and scope of public participation has to be basically voluntary and non-political in nature and depends on the prevailing conditions, duly encouraged and patronised by the Government.

After independence, various State Governments started raising their own voluntary organisations, but perhaps without clear-cut character of duties and uncoordinated at national level. With our experience of the last 28 years, we should be in a position to form a clearer picture of an integrated voluntary organisation, which will appreciably help in fostering national integration and discipline which are essential for national progress and easing of social and economic tensions among the masses. The organisation will also act as watchdog of the nation assuring a feeling of justice and security to the population in the face of internal disturbance or external aggression and thus building up and sustaining high morale.

INTEGRATED FORCE

At present we have Territorial Army, National Cadet Corps, Home Guards, Civil Defence and various Youth Services as the main voluntary organisations under government patronage. Their roles, training and performance will indicate lack of coordination and duplicity, which, it will be appreciated, hardly justifies the present enormous avoidable strain on the public exchequer on these organisations separately. The widespread continuing indiscipline amongst the students till the proclamation of emergency shows that there has been no effective return of the huge expenditure incurred on the NCC. These organisations generally and

loosely are also referred to as second line of defence, which in the present context is a misnomer. In resisting the enemy aggression or facing any national adversity, the whole nation must rise as one *i.e.* there has to be total involvement. This aim can be achieved when the nation is nationally disciplined through the medium of National Home Guards Organisation.

SAVING TO THE NATIONAL EXCHEQUER

Integration of all the existing voluntary organisations along with the possibility of reduction in the State armed police forces will achieve economy to the tune of several crores of rupees annually. Hence there is a case for the formation of an integrated force to be known as National Home Guards under an Act of Parliament, with specific charter of duties, which of course, will require periodical review in the light of our fast changing socio-economic conditions. Study of voluntary organisations in foreign countries may also help evolve our own pattern. However, to foster a sense of discipline among minors, the Boy Scouts & Girl Guides organisations in a modified form should continue to function.

ROLE AND ASSIGNMENT

There are permanent government agencies, who are responsible for ensuring a clean public life, but their performance has so far not been upto the desired national expectations, whatever the reasons. Generally the Home Guards should be assigned to assisting the Government in their activities and in such manner as deemed desirable in the service of and being conducive to better living of the masses. Thus, some of the suggested tasks/roles which the Home Guards should be called upon to undertake are—

- (a) in times of war, relieve the Armed Forces of security duties at Static Defence Installations including the airfields and communication duties in Rear Areas, during which period, the volunteers may be required to be put under the Army Act;
- (b) during peace time help the armed forces in manning the international borders for which tasks, being locals, they will prove very effective; they can also be useful in counterinsurgency roles ;
- (c) in times of war, provide partially trained recruits to the regular armed forces without loss of time, thereby ensuring constant national preparedness;
- (d) carry out civil-defence duties including guarding important civil installations and suppression of rumours during emergency;
- (e) help in running of essential services in emergency;
- (f) assist the Government in maintenance of law and order (particularly in "trouble prevention" and "restoration of normalcy" roles), social harmony, traffic control and prevention and detection of crimes;

(g) educate the public in inculcating civil sense like cleanliness, road-sense, queue discipline, public distribution system, price control and so on;

(h) help the administration in preventing and curbing anti-social activities like hoarding, smuggling, adulteration, grafts, thefts, deliberate harassment of public by government officials and so on;

(j) help in national development projects;

(k) help during and after national calamities and accidental disasters like floods, earthquakes, fires, epidemic, accidents, and so on;

(l) act as Information Guides to visitors and tourists and help the ignorant complainants in redressing their grievances.

(m) provide eyes and ears to the appropriate government authority regarding laxities in implementation of government policies, programme (Prime Minister's 20-Point Programme in the present context), directions and projects, on the part of those responsible for the same, thus help in booking the corrupt, the obstructionists and deliberate delayers.

BROAD-BASED RECRUITMENT AND REALISTIC TRAINING

The members of the organisation should be recruited from a cross-section of people with proven personal integrity and sense of dedication. People with strong political leanings and those who are active members of political parties should be kept away. The existing conception and practice of recruiting Home Guards from "lower-strata" of our society requires radical change. By and large, at present, the main motivation for volunteers is supplementing their meagre income rather than social service. The highest to the lowest from all professions and walks of life should enrol themselves in the organisation. The highly placed in government offices and society, when working as Home Guards, will be in a better position to realise the difficulties of the common people in the actual implementation of government measures and thus rectify the same. This is necessary for a proper social order. They should owe supreme loyalty to the constitution and national integrity. The volunteers should be recruited for a specified period in rotation, with liability for call up in emergency.

The expenditure on raising and training of National Home Guards should be borne by the Central Government. The employing agency e.g. Central Government, State Governments, Railways, Public or Private undertakings and so on, should pay for the duties performed for them.

Volunteers, after a screening test, found with required potential qualities, should be given initial intensive training with periodical refresher training. Training conditions and environments should infuse a spirit of enthusiasm, dignity and pride in the volunteers. It should be appreciated that such volunteers cannot be subjected to the same rigours of training as any regular armed organisation.

The training schedule and syllabii should aim at building up character qualities and ensure in making them adapt in carrying out the tasks they are assigned, besides being realistic in approach. Subjects like physical training, drill, unarmed combat, weapons and field craft training, first aid, communications, antidacoity measures, rudiments of law and constitution, intelligence and national security, national language, rescue and disaster fighting operations, fire fighting, civic education, driving, anti-flood measures and indoctrination in nationalism, politeness and etiquette.

Training institutions at district and State levels are required. Besides these, there is a need for a National Home Guards Training Academy for specialised, advanced and leadership training to selected volunteers ; it will ensure promoting a sense of esprit de corps at national level.

ORGANISATION AND CONDUCT

The National Home Guards should have four wings, *i.e.*, General, Students, Women's and Armed, but without watertight compartmentism. The tasks assigned to the various wings are to be based on the vocation, aptitude and capabilities of volunteers, *e.g.* the Women's Wing is more suited for carrying out welfare activities, nursing and manning communication set-up, the Students Wing is suited for civic education and Information Guide and Armed Wing for guard and protection duties. The General Wing should mainly provide internal security and functional units.

The sub-units like a section, a platoon or a company should correspond to the extent of localities on mohalla, village, town or city basis. The leadership element should be provided by the respected prominent citizens of the locality who are politically non-aligned. Ex-servicemen will prove very useful.

All the sub-units are required to be designated for particular tasks, though in emergency for maintenance of law and order and in case of calamities, all National Home Guards should be able to stand upto the occasion. The necessity of continuous training and requirement for sudden deployment for unforeseen incidents imply that, though a voluntary organisation, it requires a nucleus of permanent staff and some units, officered by a separate Central National Home Guards Cadre of Officers. To be effective, the permanent units or sub-units are required to be appropriately located and equipped to suit their roles, ensuring timely availability of men, equipment and stores, later reinforced by volunteers. A fool-proof system for mobilisation is required to be worked out and periodically rehearsed.

Although the National Home Guards and the Police will have a complementary role to each other, the former should be an independent organisation and its voluntary character should be maintained at all costs.

This is essential if the National Home Guards have to assist the police or vice-versa in their duties like restoration of normalcy at the end of a complicated law and order situation and maintenance of social harmony.

This they can do with advantage as the affected public will not carry the same feeling of apathy towards them as against the Police because of the latter's role and responsibilities in dealing with law and order situations.

The National Home Guards in their conduct and behaviour must use tact, persuasion and politeness rather than authority and force, when dealing with public in discharge of their obligations. They should not become spies or usurp the role of intruders in personal life of people, otherwise they will defeat the very ideal for which they stand, besides inviting unpopularity and non-cooperation from them. They also must act as proper disciplined force with dignity and impartiality, so that they are held in high esteem by the public to fulfil their tasks effectively.

In case of national emergency of any type, it should be possible and desirable that the volunteers from one part of the country are pressed into operation where emergency so requires. Such occasions, however, are envisaged to be rare.

HIGH PUBLIC IMAGE

Conditions of enlistment of volunteers must be conducive to creation of high image in the public eyes. The administrative and law enforcing authorities should extend due respect and recognition to them and their work, which entails mutual understanding, liaison and co-operation.

An efficient organisation requires devoted officers with national outlook. For this purpose the need of creation of a Central Cadre of officers for staffing the permanent nucleus of the organisation is imperative. The practice of giving additional responsibilities in respect of Home Guards or having officers on deputation is neither desirable nor conducive to effective functioning of the organisation.

The Home Guards deserve a distinct smart uniform with appropriate badges of rank, which is one of the very important factors in attracting right type of volunteers from all walks of life to the organisation. A proper code for recognition of their services of exceptional nature and of punishments for any undersirable and shameful acts should be laid down.

The recruitment of "the better placed in society" will go a long way in enhancing the image and prestige of the organisation.

Though the Home Guards are volunteers, they are required to be compensated monetarily as partial incentive. Provision of retention allowances, when on duty or training, medical care and compensation to the dependent(s) in case of death of a volunteer should become the solemn responsibility of the Government.

Activities of the National Home Guards of exceptional nature deserve due publicity through the medium of a non-official periodical magazine, documentary films, TV and radio. Weekly supplements of the national newspapers should carry articles on their social usefulness.

CONCLUSION

For fostering and sustaining national integration and discipline covering all aspects of our socio-economic structure, national preparedness at all times and achieving the democratic aim of the greatest good of the greatest number, it is imperative that a non-political integrated voluntary organisation, designated as National Home Guards, consisting of people from all stratas and walks of life, at national level is formed and duly patronised by the Central and State Governments. The proposed National Home Guards Organisation will help not only in consolidation of the gains of emergency, but also in sustaining them. It will also reduce the burden on public exchequer to an appreciable extent ensuring at the same time the desired results in more effective way. The concept of National Home Guards, if implemented, will be a much desired, bold and successful experiment in generating national self-discipline, self-policing, self-service and self-reliance, in short a source of national strength and solidarity.

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CORPS OF MILITARY POLICE— OTHER SIDE OF THE HILL

MAJOR GS THAKUR

A barrier of misconceptions exists between the Corps of Military Police and the others whom they serve. One such expression can be found in the article "CHANGING TIMES" (The USI Journal Jan—Mar 74) which implies that CMP does unsuitable duties, functions improperly ; lacks mature understanding, and dedicated men ; harbours ills those akin to the civil police ; is used in subjective manner only to catch others ; has a faulty outlook and teaching and needs to be kept in its proper place. Further that wrong type of personnel, the unchecked ease of movement, isolated location of Traffic Check Posts, lack of disciplinary powers of local Commander over CMP and implicit acceptance of word of CMP all make for an ill-disciplined force which is bad example to others. Notwithstanding the reasons behind these beliefs, they appear to be abstract in nature and can hardly stand to any scientific reasoning to be true of the CMP as a Whole. One should however be indebted to the writer of Changing Times for having given some concrete form to the hitherto undefined misconceptions about the CMP for, by doing so, he has provided an opportunity for constructive discussion and mutual education between those in the CMP and those of other Arms and Services. In the succeeding paragraphs I shall try to throw some light on the unseen side.

Stresses and functioning within the CMP are unique in nature and can be seen and felt only from within ; realization of these is essential also for those who employ this Corps for its effective use. In spite of these, however, the Corps is well on its way to maturity, and officers and men walk with their heads well above their shoulders while serving with the Corps and cherish their experience on leaving it as most rewarding. It goes without saying that the CMP has contributed a lot towards controlling the behaviour of Army personnel outside their units. Likening its shortcomings to those of the civil police may seem quite rhetoric ; it should, however, not be difficult to imagine what would have happened to the peace and tranquility of civil life, if the police force, with all its ills, was to be totally removed from the scene or subjected to live in degradation through propagating thoughts of responsible people which touch the very spirit behind the organisation.

A police force is there to maintain law and order just as a Doctor is expected to preserve life and promote health, and a Judge is expected to administer justice. Maintenance of law and order, preserving life and administering justice are the Ideals which they strive to achieve, their total failure in a single case or a repeated partial failure to achieve the ideal does not render their utility to the society null and void, as each of them in addition to being a policeman, a Doctor and a Judge is also a human being equally subject to effects of environments at birth, growth and contemporary life which shape their personal behaviour on the one side and personality and capacity to analyse on the other to decide and act in a given set of circumstances. Results of their actions may thus vary from total success at one extreme to total failure in the other, as individuals and as professionals. These, unless viewed with discretion, will tend to over-shadow their practical average performance.

'Good' can never exist in exculsion of its counter part evil. Evolution of the industrial society brought with it untold ills. Yet the good that industrialisation achieved outweighed all these considerations and nations after nations have gone ahead with programmes of rapid industrialization. Attitude has been one of finding new methods of dealing with the individual ill effects as they unfolded themselves rather than shelving the programmes or decrying the scientific advancements. Ever since the inception of the CMP in the Army, the Military Police have been comparatively more emancipated soldiers.

These are men not different in class ; they have only different attitudes. An average Military Policeman falls in this category (sincere, dedicated, persevering). Development of this attitude is a natural process in the Military Policemen which can be made positive and rapid through proper guidance and personal example by their leaders ; and can be retarded by undue subjugation, uncalled for comments and petty restrictions by their superiors. It would therefore be more proper to deal with the wrong doers individually rather than trying to keep the Corps of Military Police as a whole in "its proper place". Lest the hurt pride and damaged self image of the larger numbers within this Corps affect their professional output (which is silent and abstract and can be measured only indirectly through decreased crime rate outside the units in the rest of the Army in peace, and smooth flow of men and materials in war).

Officers and men of the CMP do not live like frogs in the well, unaware of happenings good and bad around. The very nature of their duty bring them to grips with real life situations, usually created by others. They are not normally at the mercy of another thinking brain in the execution of their duties. They, therefore, develop initiative, sense of purpose, urgency of situation, and confidence through personal experience. They tend to be psychologically more mature and think-plan-and-act.

individually, in addition to dealing with normal administrative/training activities in the unit. Also, better physique and personality, better education, pride of exclusive differentiating uniform, awareness of their statutory powers and authority for enforcing orders go to make a personality which ought to be clearly different from an average Army Soldier, who through the ages has advanced from 'follow the leader' to 'look before you leap' and is yet required to be prompted by the leader to do so.

A CMP officer, although he is supposed to be the adviser to highest Commander, is placed under a Staff Officer who is probably at the third or fourth rung in the channel of commander/staff. The actions of the Provost with regard to implementation of policies of discipline will be dependent upon not what the policy "really is" but on what the staff officer "thinks it to be" or as seen by him through similar coloured glasses, shall be say "judicious interpretation of orders". Thus the 'intended policy' at times tends to be at variance with the 'executed policy' (may be in a small way but it affects a larger population) till the results come to the light of the originator through an intended probe or accidentally. More often than not, Provost become a perfect shock absorber, inefficiency(!) and the wheel of command moves another turn. It is, therefore, essential that the Provost staff officer enjoys full confidence of the highest Commander in a formation and that he has no doubt about the existing policy for the Army as a whole and its interpretation/applicability as modified for local conditions. It goes without saying that if a Provost office is not able to deserve this confidence then the only other alternative is that he be got rid off fastest. A state of indifference at this level can only develop rust in the Provost machinery. Provost task redefined by the writer of the Changing Times 'in practice to catch others' may now be seen in the light of the fact that, it is the policy percolated through the Provost staff and Commanding Officers which guides the actions of the Provost personnel as seen by the larger numbers outside. This may be active, passive, objective, subjective or merely indifferent. The class of men we have in our Army are second to none in the world whatsoever they are, it is the duty of all the responsible people to use these men effectively by exploiting the good in them (of which there is enough) without ridiculing them for their shortcomings (which we all have). Merely hoping to change the class of men will not help as probably even the rest of the Army is not yet prepared to use different class of men in the CMP. In a transitory state of the changing socio-economic structure of our country this is a process which will remain ever changing and must be allowed to take its time to stabilise itself.

Mental outlook as seen in a limited contact of the CMP has no meaning. It must change in a larger sense from that of a slave to that of a free citizen which automatically throws more weight on one's duties and responsibilities, than one's rights and freedom for this, that and the other.

Life could indeed be worth living when there will be no illegitimate requests to by-pass existing regulations, to the CMP officers and men; there will be no refusals, and indeed lesser charges of harassment against the CMP.

I have not come across any teaching in the Corps which induces the Military Policemen into wrong action. If at all, the motto *Seva Tatha Sahayata* and attributes of an ideal Military Policeman that is, faith in God, willingness to serve God's creation, being ever prepared to render help to fellow beings, patriotism and devotion to duty, are the finest for any soldier. Policing duties are no doubt onerous and sufficient knowledge is being imparted at the CMP Centre and School centrally to ensure uniformity and high standards. Yet with all that, a Military Policeman only remains a tool towards an end, its improper use may damage it and its disuse, develop rust. The fact indeed is that no tool can ever use itself and therefore cannot be blamed for the result it produces.

While on subject of training I may also mention that CMP till recently had selected its men from volunteers (they came by choice and by option) from the other Arms and Services. Recently the direct entry has been started and the task of training an assorted lot of soldiers as MP men, has changed into converting raw material into soldiers and soldiers into MP men. Time of one year at the centre as recruits is hardly enough as an introduction to their tasks ahead. Their further progress therefore has to be through "On the job" training in the units, by grouping them with other mature and trained MP personnel. They are however bound to have their teething troubles. The red flag an Infantry soldier displays at the target end before he takes part in the ARA competition years later, is never noticed by any one except his company commander. The biggest help he gives is 'How is he going to grow up if he does not make mistakes'. Alas! when a MP man shows a wash out on the road side the whole world sees him, not to speak of what they say. He is required to report cold facts; at the same time he is to do it without offending any body or hurting himself. Psychologically he is to be very mature and emphatic, that is, capable of assessing the reaction of the defaulter (though senior to him) before saying any thing to him. A practical dilemma which a young MP man is faced with. While he is struggling to formulate his own values and code of behaviour he finds himself confronted with immature behaviours of the age/senioritywise older lot who would do anything to get out of the mess they find themselves in after being checked by the MP. No wrong is to be done unless there is a valid reason and if there is a valid reason then why not let the MP man do his duty and let him report; be kind to him and help him in doing his duty. He may well be on the way to learning better behaviour and feel a motivating pleasure in doing his job.

It may not be correct to assume that the CMP is only a checking and

reporting agency with no other powers/duties. The Military Police is sufficiently charged with legal powers under Section 107 of the Army Act 1950. Their charter of duties and powers with regard to arrest and detention are amplified in AO 669/73 and executive power in addition to the above which are vested with the members of Military Police as incidental to performance of their MP duties are given by the order of the Chief of the Army Staff. These are sufficient for an MP man to be able to carry duties likely to be assigned to him. However, one thing that needs clarification is that the Military Policeman does not report every case just for the sake of it or with the intent to cause harassment; this is a fallacy that exists and gains much weight through loose talk. Military Policeman also has the authority to advise and warn the defaulters, and report cases as a last resort depending on the seriousness of the crime.

First two stages, before making a report may have to be omitted only on the basis of repeated occurrence or omission of a particular nature, for data collection, for example, to enforce specific remedial measures.

It has been pleaded that the OC units word should be accepted as final. Action to be taken on the MP reports, has been always and is by law the prerogative of the Commanding Officer. A study carried out during period Nov 73 to Jan 74 (three months) in a certain formation revealed that of the 133 total cases reported by MP, action was completed only in 55 cases (42%) by 05 Mar 74. Nature of punishment in these and their percentages are as under :—

<i>Nature of punishment</i>	<i>Total</i>	<i>Percentage</i>	
(a) Reduction of rank	—	—	7.3%
(b) Severely reprimanded	—	—	
(c) Reprimanded	1	1.8%	
(d) 14 to 28 days RI	—	—	
(e) 3 to 13 days RI	3	5.5%	
(f) 3 to 21 days CL	15	27.3%	81.7%
(g) Extra guard duties	4	7.2%	
(h) Warned/Admonished	23	14.8%	
(j) Nature of punishment awarded not intimated	3	5.4%	
(k) Cases withdrawn after satisfactory reply	6	10.9%	10.9%
Total		55	

In a nutshell, it will be seen that, firstly, 89% cases warranted disciplinary action (since in these some action was in fact taken); secondly, 10.9% cases withdrawn after satisfactory reply also proves that, but for special unavoidable circumstances or overriding considerations disciplinary action would have been warranted; thirdly, not a single report was questioned

for its validity (an odd occurrence is not ruled out) which may be taken as some measure of the performance of the CMP.

It can be left to any one's imagination whether such a high rate of cases dispensed with confinement to lines, warnings and extra guard duties could have produced the right effect on the persons receiving the punishment and the others in their unit. The commission of the offence being outside the unit lines it could have had any motive. If there were grounds to believe that the individual was not at fault then why he be punished at all, and if the evidence proved the charge then why such a minor punishment? Infallibility of a Commanding Officer, the leader of men, is also an ideal to strive for in practice. Lest we harbour any tradition bound notions, let us be rational and down to earth and call him a human being.

It is for this very reason that Army Order on the subject was published and attention of all is repeatedly drawn to it to ensure implicit action to be taken on the MP reports, this (implicit action) has been stated as a cause of making CMP an ill-disciplined force. I would give a greater weight to the reasoning that implicit acceptance of the word of MP men will give average MP man a sense of achievement when he sees that cases reported by him are actually dealt with (one single major factor for effectively motivating him towards his duty). A suppressed or unactioned MP report apart from leaving a sense of frustration in the mind of MP men tends to camouflage prevailing standards of discipline under "all is well" till one day a proud unit fumbles into a crisis merely on grounds of discipline. What a heavy price to pay for preserving its name in isolated disciplinary cases. There could be other reasons for this fact and there could also be no positive assurance that more are not heading the same way, whatever little contribution the CMP has to make, "It is the best friend any commanding officer can depend on outside his own unit to help him in commanding his men, saving them from bad environmental influences and maintain the dignity of service". Nurturing such a relationship by all will go a long way in achieving our common goals.

Lack of disciplinary powers of local Commanders over the CMP personnel has been stated as cause for ill-discipline among the CMP. It will be interesting to note that delegating powers to the lower commanders over CMP personnel in one formation has produced following results :—

- | | |
|--|-------|
| (a) Effective CMP strength deployed near formation HQ | —25% |
| (b) Effective CMP strength serving under delegated power | —75% |
| (c) Troops strength near formation HQ | —30% |
| (d) Troops strength away from formation HQ | —70% |
| (e) No. of reports initiated in one year :— | |
| (i) By near formation HQ | —187 |
| (ii) By MP personnel in delegated power system | —None |

If we were to extrapolate the figure of 187 above, by any reasonable guess we should have at least 300 reports at (e)(ii). Since it has not happened we may wonder why and find a number of reasons. Notwithstanding the reasons, its effects are indeed glaring. One, the figure passed to the higher authority as being net cases reported gives a false picture of all well; two, adequacy or otherwise of CMP resources is not easily ascertained which creates areas of over work or waste of CMP men. It is not uncommon to see an MP man standing in a Brigade HQ in-gate doing something which can as well be done by the Corps of Military Police, or manning a Trijunction of a road leading to it from where not more than 5-7 vehicle pass in a whole day. CMP men are specialists, they must be kept mobile to maximise their effectiveness. Three, MP men when placed under command unit/HQ other than those of the Corps of Military Police tend to be left to themselves. They find a loose rope to hang themselves with or are dealt with too severely which is more often than not detrimental to their functioning. Four, psychology of an MP man can best be understood by an MP officer who can and should be the one to investigate charges brought against his men, which desirably of course should be investigated with greater vigour, just as by others in the case of MP reports to ensure exemplary behaviour. Five, placed outside the MP channel of reporting the MP man experience a sense of in-security in the embarrassing nature of their task of reporting. 'Live and let live' spreads like a disease and it directly affects their job output and indirectly the formation they serve.

Unchecked ease of movement, is stated to be a contributory factor for ill-discipline among the MP. Without his mobility one might wonder whether he will be able to do justice to the job in hand. It is indeed paradoxical that the 'Changing Times' is full of appeals for greater freedom, liberalizing out passes and dress regulations for the men of rest of the Army and the very aspect of movement so essential for the performance of his duties effectively is recommended to be denied to a CMP man. On the other hand, notwithstanding its side effects, I would recommend that a more detailed study be done using an MP man as a "Sample-under-Indian-Conditions" for considering the good effects of the freedom of action, freedom of movement and freedom to think and act without guidance, for its applicability in a wider context of the Army as a whole.

I am no psychologist but I am confident that this is a major factor for breeding psychologically mature echelons in the services and most of the effort that is wasted in 'getting' others to do their work will be saved by letting others to do their work. The leader will then have time to think, co-ordinate and supervise, ordering minor changes to the main course. Lest the reader is tempted to consider that there has been a digression I might add that when MP is let loose on a duty, he normally has specific orders about what he is expected to do. On completion of his duty he makes a report on what he did during his tour of duty and MP officers/JCOs/NCOs

make a round to see that what the MP is expected to do is in fact being done by him, or to give him on the spot guidance. One may now see that the MP who will normally be on duty in pairs are often not all that lonely or unchecked as one might imagine.

If the CMP is really an ill disciplined force some measure of it must be found in the crime rate within the CMP units. In a recent study, the number of cases punished in a period of two years in five CMP units were compared with Infantry, ASC and EME units. Variation from the mean of average (prevailing) rate of punishments, was found to be about 1% higher in the case of CMP but was lower than some others when compared individually. Nothing to be proud of though with a bit effort the standard could be better alround; one thing is sure that the myth of the CMP being a bad example to others has no rational basis. Exception if any will only tend to prove the rule.

In sum, I have in the foregoing rather lengthy paragraphs tried to present the brighter side of the CMP. We cannot expect all to be rosy indeed. Human beings committed to the task of correcting others while themselves also subject to some natural failings are bound to have and sometime create, problems of a complex nature. The authorities in the CMP are very much alive to these and active thinking is already being done for improvements in areas where they are needed. I express my gratitude with all humility to the writer of the 'Changing Times' for providing an incentive to speak in a sympathetic response to improve our Army of which Corps of Military Police is a part : this paper is projected to all those who agree with him and others who may misunderstand his hidden positive intentions and get swayed by the flow of his language ; changing their hitherto positive/indifferent attitude towards the CMP into a negative one. The inside story is told with a hope that mutually interacting forces of misunderstanding between CMP and others, arising out of the stray occurrences or lack of exposure to the assets of the CMP, will balance themselves at a higher plane of mutual trust, understanding and wisdom.

Having provoked you to think (I hope positively) about the CMP, I close with a question, "Is this barrier of misconception about the CMP a major factor in denying it a permanent cadre of Officers ?"—A long unfulfilled desire of the Corps of Military Police.

AUGUSTUS CLEVELAND

PC ROY CHAUDHURY

A young military officer was given the heavy charge of conciliating the hill tribes of Bhagalpur and Rajmahal Hills in Bihar and was made the first civilian Collector of that District in 1779. He died on the 13th January 1784. In honour of his memory the Governor General in Council ordered a public monument. A monument of stone was sent by the Court of Directors from England and was placed in front of the spacious house Cleveland lived in by the Ganga river in Bhagalpur City. This house known as the Tila Kothi as it is on a mound is now the main office of the Bhagalpur University. The landholders of the district erected a monument of brick to the memory of Cleveland. It is a lofty building almost opposite the Circuit House in a spacious maidan known as Sandy's compound. It consists of a pyramid structure surrounded by a heavy Grecian gallery as described by Buchanan Hamilton.

But a greater honour was given by the Santals and the other Hillmen of Rajmahal area to this young military cum Civilian Officer. For generations of them remembered him as the "Chilimili Sahib" who was the loving "Collector Bahadur". What was the secret of all this? We do not know of such honours to a Collector of a district in the hands of the East India Company or the hillmen who had caused a terror to the Company Bahadur in those days.

In 1765 when the East India Company was invested with the *Dewani* Bhagalpur District was a huge territory with indeterminate boundaries as the hill areas were very unsettled by the constant inroads and disturbances of the aboriginal tribes. It was not till 1774 that an officer was specially deputed to ascertain the limits of the district. Such incursions and disturbances were quite common in the days of the Muslim administrators who had tried to solve the problem by the creation of the *Ghatwali* tenures where lands were assigned to ensure safety to the passersby in the ghats or passes against the wild tribes and dacoits. But many of the Ghatwals themselves became the oppressors. The early British administration had to continue the Ghatwals and the change of administration made the problem more acute. Captain James Brown, an officer who had the command of a Light Infantry Corps was appointed to hold charge and to evolve some system of rule. It was difficult to come to a quick solution and in 1779 in spite of Capt. Brown's vigilance two loyal Zamindars of Mandar were killed. It was at this crisis Cleveland was put in charge and a very challenging task confronted him.

The subjugation of the hill chiefs and rule over them was an all assuming thought of Cleveland. He had fully appreciated that fire and oppression could never succeed. Capt. Browne had also thought of it but could not work out the scheme. In agreement with the principles of justice and humanity a state of warfare was carefully avoided. The policy of treating the wild hillmen as enemies was abandoned. Cleveland wanted to win them over by love, kind treatment, medical care and improvement of their material subsistence. This lent a new colour to the situation. A few hillmen were won over, brought to the camp, well treated, fed and clothed and sent back. They got others and the circle extended. Very soon Cleveland's camps were full of the hill tribes who had murdered, many chatting away. Quite often Cleveland would go out on tours through the hills and part of the junglerry areas and he would meet the hill chiefs and dine and wine with them followed by presents. He made it clear that this was being done by the Government and not by him. Further he saw that want of employment and a precarious existence between death and moribund life often threw the hillmen to plunder and murder. He started giving them employment under the Government.

The name of Cleveland should go down the military history of India that he raised one of the pioneer Forces consisting of hill tribes completely trusting them and giving them training, arms and responsibility. A Corps of Hill Rangers consisting originally of 1300 men was raised. It is an instance of Cleveland's vision, human touch and sound judgment that he named the Force as Jaurah corps and gave the charge to one Jourah, a hill chief. For many years they were armed with bows, arrows and spears and were put on the same footing with other Forces. After some years they were armed with muskets instead of bows and arrows. Later he took in Hindus from the plains in Jourah's Force and that gave a spirit of comradeship with the previous enemies.

Cleveland gave the same allowances to the Hill chiefs who were officers as he did to other Indian officers. He had also set up a court consisting of the officers of the corps of the Hill Archers for trying the delinquents. All these measures administered with kindness but laced with discipline that converted the area from a disturbed area to a zone of peace and tranquility. The Hill tribes who were dreaded quitted their former mode of life. The junglerry was as good as any other district. Cleveland came to be known as the Chilimili Collector Bahadur. He actually became a legend to the hill tribes.

Cleveland was not a dreamer. As an additional precaution against a revival of raids and disturbances he followed a plan and settled invalid soldiers and their families on the waste lands between the hill country and the plains of Bhagalpur proper. The Bhagalpur District Record Room has a large number of letters on this settlement of invalid soldiers. He gave lands, seeds and encouraged proper agriculture. The quantity of

land varied with the position of the soldiers in their units. At first settlements were made on the south of the Ganga, then extended to the north and the west.

Cleveland had worked very hard and fell seriously ill and had to go on leave. As mentioned he died soon after in January 1794 after he took leave and very few of the early military turned into a Civilian Officer of those fluid days received a greater homage from the Crown and the people. The story of an officer like Cleveland should not be relegated to the limbo of oblivion or history only. By his unique achievements in the course of a brief span of a little over five years and hard work which did bring about his death he had chalked out a very definite line as how to bring round such wild tribes who are not easily amenable to the discipline of administration. Similar problems do beset the various parts of the world today. He also showed that trust begets trust. Lastly he did show that a soldier could rise to the occasion if trusted and could deliver goods working in a different and very hazardous task.

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BOOK REVIEWS

TO GUARD MY PEOPLE : THE HISTORY OF THE INDIAN POLICE
by PERCIVAL GRIFFITHS

(Published by Ernest Benn, London, 1971) pp 444, price £2.50

THE British connection with India was long and eventful. It was not without its share of bloodshed and coercion : the instruments of all conquerors. To this extent, the peaceful transfer of power to Indian and Pakistani hands in 1947 when, although there was communal strife, the British were not hostile targets, nor were they involved physically in fighting a rearguard action, was an event unique in colonial history, though it has become commonplace since.

This relatively smooth handing over of responsibility gave former British administrators, the time and atmosphere for introspection, to attempt a summing up of their contribution to India's development. Thus, the tribute to the Indian Civil Service by Philip Mason, himself a former member of the Service and writing under the name of Philip Woodruff, in his two volumes published soon after Indian Independence, entitled 'The Founders' and 'The Guardians'. These series—'The men who ruled India'—represent a British assessment of that Service in India's evolution and progress to full statehood ; well documented, well presented and eminently readable. Sir Percival Griffiths, also a former member of that Service, with much experience of Indian affairs, political, administrative and commercial, has now paid tribute to the Indian Police—a much maligned force—nevertheless richly deserving the appreciation and recognition now given, of its services to the community.

A historian labours under considerable difficulties in his task. If he attempts to write of events of recent origin, he can be criticised for lack of objectivity, or for an excess of it, if he upholds the motives of the decision makers who, if they happen to be foreign rulers as in our case, can never be exculpated for their doings, right or wrong. Complete historical detachment is hard to sustain. In that sense, all history is subjective, according to the predilection of the writer ; his nationality, his ideas, concepts, purpose and motivation.

In this work, we are not concerned so much with political decisions, as with a record of the evolution of the Indian Police, from the days of the East India Company, to Partition. With this, the objective reader should have no quarrel, howsoever he may disapprove of the British

connection, or what he may regard as the willingness of the Indian Police to uphold British rule. For, in the final analysis, the function of a government is to govern. Whether the forms of rule were those of indigenous Hindu monarchs : or Moghul Emperors of foreign origin ; or British colonials ; or our present constitutional framework ; all have imposed on them certain responsibilities for the maintenance of law and order. Their political aims may vary, but they can be pursued only in a climate of internal peace.

Sir Percival Griffiths has approached his subject well. He begins with a brief history of the Police in pre-British India. The rulers in the early Hindu period recognised the four main elements in the organisation of society against crime—communal responsibility, village watchmen, espionage and penal provisions. These hold good even today.

Sir Percival goes on to tell us the story of the organisation of the Police by the British in the Presidency Districts of Madras, Bombay and Bengal. It is fascinating narrative, replete with anecdote and well documented. His research has indeed been prodigious. With the extension of British rule over other parts of the country, the suppression of Thuggee and Dakaiti, professional poisoners and Sutte, became the special responsibility of the Police. Their success in these operations is recounted vividly. The British respect for legal sanction, to cover police operations is emphasised. There are interesting dissertations on the Indian Penal Code, the Code of Criminal Procedure and the Indian Evidence Act, and examples of their practical application. There is much also of British professionalism in administration—the setting up of Police Commissions at intervals of time, to recommend measures for the reorganisation of the Police—and a critical analysis of their outcome. There is an account of the Police in Burma, their part in suppressing the Revolutionary Movement, Civil Disobedience and the Police, the Terrorist Movement, the Moplah Rebellion and the communal troubles in the first four decades of this century. Part III of the book deals with operations and techniques, science in the service of the Police, Finger Printing (India was ahead of Scotland Yard in this respect), the creation of the Criminal Investigation Department, Criminal Tribes, Special Forces such as the Frontier Constabulary, the Assam Rifles, River Police, the Railway Police and finally, sketches of some notable Police officers, including two Indians.

This is a work of scholarship and dedication. To your reviewer's knowledge, there is no existing official History of the Indian Police, covering this, or the post-Partition period. If there is, it has received singular lack of publicity. Sir Percival Griffiths' labour does more than fill this void. It is a human account of the trials and tribulations of the rank and file of the Police, and a tribute to their steadfastness and loyalty. He has drawn not only on a wide and select bibliography ; he has included

unpublished accounts from former members of the Force, which add greatly to interest and colour. There is an excellent selection of photographs, to complete the historical record.

An authoritative book, very readable and educative. It does much to dispel general ignorance of the origins and duties of a Force, which we tend now to take for granted, but without whose devotion to duty, the citizens of the country could not pursue their peaceful vocations.

MLT

THE PENINSULAR WAR 1807—1814

by MICHAEL GLOVER

(Published by David & Charles, Newton Abbot, 1974) pp 431, price £ 6.75

THE Peninsular War has come to be known as the Spanish ulcer which bled Napoleon white and brought about his downfall. Since Louis XIV's time France had cherished an ambition to annex her neighbour Spain (Louis XIV is reported to have exulted upon his grandson's ascent to the throne of Spain and said that the Pyrenees had ceased to exist, and during the 12-year war of Spanish Succession, 1701-1713, he wasted thousands of French lives and millions of treasure). Napoleon inherited that ambition and tried to accomplish what his great predecessor could not. The Treaty of Tilsit (1807) marked the high watermark of Napoleon's career, but his conquests gave rise to the spirit of nationalism and resistance in the hearts of the defeated; and the same year saw the beginning of the Spanish patriotic war, the fire of which blazed for the next seven years and ruined Napoleon's resources in men, money and glory. The British took advantage of this to send troops to the Iberian peninsula to fan the patriotic fire and destroy Napoleon's power. Napoleon had lost interest in this desultory war, and left it to his marshals, but it drained away his men and materials, and gradually the French forces were made to retreat beyond the Pyrenees.

'Although the book under review is not as voluminous and detailed as Sir Charles Oman's "History of the Peninsular War" in seven volumes, or William Napier's "History of the War in the Peninsula and South of France" in six volumes, it is certainly a well written and informative treatise. The book has been well-organised into 22 chapters, with 25 plates of illustration, 19 battle plans, 5 maps, 116 biographical notes, lists of British regiments and British Army Staff that took part in the Peninsular War, names of Commanders of the French Armies in Spain, Orders of Battle of the British Army, outlines of the Organisation of the French Army at various periods of the War, and a bibliography.

The author in his book aimed "to tell the story of the war in a comparatively concise form...while relating it to the men who fought in Spain and Portugal, and to give some impression of what it was like to march and fight, to eat and be wounded, to command and be commanded at the

beginning of the nineteenth century,.....whenever possible events are described in the words of those who took part in them." The author has undoubtedly achieved his aim, and both students of military history and general readers will find the book highly interesting, readable and stimulating. The book gives the reader glimpses of Napoleon, his contemporaries and their times.

BC

AN INDIAN GUERILLA WAR : THE SIKH PEOPLES WAR, 1699 - 1768,
by ARJAN DASS MALIK,
(Wiley Eastern Ltd., New Delhi, 1975) pp 124, price Rs 20.00

GUERILLA warfare is almost as old as war itself, although modern times have invested it with more politically oriented ethos than before. It is an unconventional war resorted to by a weak party, unable to defeat its rival in a conventional war, but sure of its right and duty to fight and destroy the enemy. In other words, the guerillas are mainly sustained by a moral fervour, i.e., a faith in the justness of their cause and a will to make every sacrifice to serve that cause. This moral superiority makes up for their physical inferiority vis-a-vis the enemy. According to the author, "a guerilla is not an ill-trained, badly armed civilian—soldier, as he appears to be; he is, rather, an intensely motivated and highly dedicated soldier who has a keen sense of issues at stake and understands the nature of war he is fighting. His strength lies inside, in the moral considerations which 'make three-fourths of him.' And his objective lies not in the field of battle but elsewhere, among the people. Guerilla warfare is thus not mere hit and run; it is a suitable mixture of military activity and political mobilisation, and the one cannot be separated from the other."

In recent historical times guerilla warfare was waged in India by the Rajputs under Rana Pratap, and the Marathas under Shivaji, prior to the Sikhs, and fought with considerable success. As in the case of the Marathas the spiritual ground for the advent of the Maratha national resistance was prepared by a number of patriotic saint-poets, the Sikh resistance was also inspired by the patriotism and sacrifices of the Sikh gurus. The Sikh resistance movement and conflicts with the oppressive Muslim rulers and invaders were, no doubt, a protracted guerilla war in modern sense, with its ideological content, political ('the Khalsa will rule') orientation, and moral considerations, present in full measure. The Sikhs like the Marathas and others, who fought against the inhuman religious persecution, economic exploitation and political oppression perpetrated by the Mughals and Pathans, made immense sacrifices and went through untold sufferings, blood-baths and holocausts (their total casualties were 1 lakh during 1716-1768, according to the author) for the sake of their religion, liberty, and way of life, and after more than half-a-century's struggle they achieved success. During this long struggle the Sikhs not

only converted their resistance movement into a people's war or national war, but also developed strategy and tactics of war, suitable for the guerilla.

In the 'Post script' the author has argued that Guru Govind Singh, the founder of the militant Khalsa, understood the importance of political power in society and the acquisition of that power through military strength. Govind Singh's words - "No one willingly bestows Raj upon anyone else; he who acquires ruling powers does so through the might of arms."—bring to one's mind Mao-tse-Tung's famous maxim : Power grows out of the barrel of the gun.

The publication under review is of absorbing interest, and perhaps the first case-study of an Indian guerilla war. Although a larger study could have discussed the subject in greater details, this book will no doubt encourage others to undertake similar researches. Some bibliographical notes, a select bibliography and a map of the then Punjab add to the value of the book.

BC

PLASSEY TO BUXAR

by D.C. VERMA

(Published by K.B. Publications, New Delhi, 1976) pp 126, price Rs. 35.00

HOW the British came to India and slowly penetrated into the Indian Sub-continent and established an empire is a story recorded by many a historian but it is never fully told. One of the important aspects, which has so far attracted scant attention of the historians dealing with this period, is the military aspect. Unfortunately, none of the Indian historians have touched upon this important aspect. Dr. Verma, who has analysed the two important battles—Plassey and Buxar—which have firmly established the British in India, should be congratulated for filling up an important lacuna in the history of this period.

The author describes how the British, who had come to India to trade, became interested in carving out an empire, finding it a weak state. Dr. Verma points out that for the first time Colonel Milles mooted the idea of establishing an empire in India in 1744. To establish their influence in Bengal, the British began to interfere in the local politics. The British knew that Shuja-ud-daulla hated the British, hence opposed his succession and gave assistance to his rivals.

Before describing the military operations, the author gives the topographical details of the area of the military operations, which greatly help in understanding the battles. Explaining the early failures of the British against Shuja-ud-daulla, Dr. Verma points out that the former highly under-estimated the strength of the latter, hence did not make adequate preparations to meet Shuja-ud-daulla's force. The details of the military

operations at Fort William are followed by an excellent analysis of the battle.

The description of the battle of Plassey is picturesque. The importance of intrigue in battles have been clearly brought out. The battle of Plassey was won by the British not in the battlefield but behind it. Mir Jaffer, the commander of the Nawab of Bengal had been won over and thus the British gained an easy victory. The author also explains the significance of the leadership in both the battles. In the battle of Plassey, when Mir Mardan was wounded, his cavalry fled. In the battle of Buxar when Taki Khan fell, Mir Kasim's army ran away.

In conclusion, the author points out that the British gained victory in these two battles due to two factors. First, they astutely exploited the faction-ridden mobility of Shuja-ud-daulla to their advantage. And secondly, the British utilized the fire arms properly. Besides, the mobility of native army was not much as large number of women in the camps were always taken. The greatest contribution of this book is that the author exploded the myth of the superiority of the Europeans as soldiers.

The book is useful to students of military history as well as political history. The analysis of the battles increase the value of the work. In order to make it understandable to general readers, the author has avoided technical terms as far as possible.

Both in collection and arranging his material, the author has shown great ability and discrimination. It is a competent study presented in a lucid style. The list of bibliography is certainly impressive, though surprisingly the original sources have not been included which the author has quoted in this work. At some places, one notices printing errors but these minor shortcomings do not lessen the worth of the book. This work is a positive contribution to our knowledge of Indian Military History.

S.D.P.

THE SINO-SOVIET CONFLICT

Edited by LEOPOLD LABEDZ & G.R. URBAN

(Published by Dufour Editions, Pennsylvania, 1965) pp 192, price \$ 3.95

THE book under review is a collection of eleven round-table discussions, sponsored by Radio Free Europe, ten of which were recorded in London in early 1964 and later broadcast in Polish, Hungarian, Czech, Slovak, Rumanian and Bulgarian from the Munich studios of Radio Free Europe, and the eleventh one was broadcast in December 1964 after Khrushchev's dismissal. It also contains an 'Introduction' and a 'Postscript' bringing the matter up to June 1965.

The following topics were the subject-matter of the radio broadcasts :

1. The Three Internationals,—Jane Degras, H.T. Willetts
2. The Split in the Open, —Brian Crozier, Roderick Macfarquhar
3. The Sino-Soviet Conflict and Eastern Europe, William E. Griffith, Deryck Viney
4. The Parties around China,—Donald S. Zagoria, Patrick J. Honey
5. The Parties in the Underdeveloped Countries,—David L. Morison, William Adie
6. The Parties in the West,—G.F. Hudson, David Floyd
7. The Ramifications of the Split in the Parties and Front Organisations,—Alfred Sherman, Kevin Devlin
8. The Uncommitted Communist Parties,—Gordon Barrass, Richard Rockingham Gill
9. Membership Trends and Electoral Fortunes,—Leonard Schapiro, R.V. Burks
10. Prospects,—Robert Conquest, Richard Lowenthal
11. After Khrushchev,—Hugh Seton-Watson, Melvin, J. Lasky

The Sino-Soviet conflict that started in the early sixties and is still going strong is one of the most important international affairs that have ever affected international relations and balance of power so significantly. Although the discussions contained in the publication took place 12 years ago, their relevance today is not lost by any means. Even in the mid-'sixties persons like John Gollan, the then secretary of the British Communist Party, were disinclined to term the Sino-Soviet dispute as a 'split', and looked upon it only as "serious differences of opinion" between the two parties, which, they hoped, would be soon overcome. Some others dismissed the ideological clash as a smokescreen to hoodwink the capitalist world.

But Labedz has, perhaps, rightly remarked that the Sino-Soviet conflict marks the end of the unity, political and organisational, of the international Communist movement and the myth of "proletarian internationalism", and has also weakened the myth of 'historical inevitability' about the ultimate universal victory of Communism. But differences and disputes in the international Communist movement are not new. They were foreshadowed by the dissensions that had ended the three Internationals (1864-72, 1889-1914, 1919-43), and the Cominform (1947-56). Disputes were always there, only the adversaries changed. From Marx versus Bakunin, Lenin versus Katusky, Stalin versus Tito, Khrushchev versus Mao, the disputes have now been depersonalised, 'nationalised' (the expression is mine) and metamorphosed into conflicts between the USSR and China, between the Soviet Union and Albania,

between China and Mongolia, and so on, and it is doubtful if international Communist solidarity will be achieved in foreseeable future.

The Sino-Soviet split has also led to the division of many of the Communist parties of Asia and the consequent weakening of the Communist movement in the world as a whole. Today, the Communist movement has become polycentric both in the East as well as in the West ; Russian ideological hegemony is no longer extant, and there is a tendency towards national and regional Communism now. The tendency of certain Communist states to remain neutral in the Sino-Soviet Conflict also reflects their coolness towards ideological dogmatism.

Many had anticipated substantial change in the Sino Soviet enmity after the demise of Mao. But they must have been disillusioned by now when the post-Mao leadership in China is reported to have emphasized the inevitability of nuclear war between the USSR and the USA, and there is no sign of abatement in the Sino-Soviet passage-at-arms. The Sino-Soviet problems are not easy to be resolved soon.

The publication is a useful addition to the literature existing on the subject, and would be read with great interest by all students of international politics.

BC

THE SWORD OF TIPU SULTAN

by BHAGWAN S. GIDWANI

(Published by Allied Publishers, Bombay, 1976) pp 372, price Rs. 45.00

THIS is a historical romance from the annals of Indian Chivalry, but "with a difference", about the life and legend of Tipu, the Tiger. He was one of the few kings who laid down his life in close combat on a bloody battlefield. His enemies' awe and respect for him, even after he was slain, is reflected by the fact that the British Governor General extradicted his entire family and Tipu's sword, sad to say, still lies in Great Britain having multiplied seven times now in different museums there.

The difference I mention, which absorbed me in this book, was on two counts.

- (a) The first came about when I had recently returned, as Chairman and Managing Director of India Tourism Development Corporation, from an interesting visit to the Seringapattam Fort after inspections of my ITDC hotels and tourist automobiles at Bangalore, Mysore and Hassan. At the ramparts of the Fort, which must have witnessed stirring events, I heard from the lips of the tourist guide a conqueror's distorted version of this last battle. There on 4 May 1799 Tipu died, with sword in hand, to Major General Baird's secret and sudden attack from the postern entrance via the original (and not President Nixon's)

Watergate. I then lamented to myself as to why Indian authors had so far not come forward to contradict doctored history, of the coloniser's prowess, against an inwardly decaying and disunited country which had once seen great days of glory.

- (b) Incidentally how many readers, and particularly military ones, are in the know of an early humiliation on the battlefield of that Great Sepoy General who defeated Napoleon Bonaparte at Waterloo in 1815? Colonel Arthur Wellesley the future Duke of Wellington, was himself badly defeated by superior generalship in 1792 by Haider Ali's forces in which Tipu played a prominent part. In fact it is this reverse which forced the British to take stock of the situation in order to plan out and prepare Tipu's annihilation seven years later.
- (c) The second difference, and one which impressed me, came about when I went through the book during the recent American Society of Travel Agents World Convention at New Orleans USA. Half way round the globe from home, and constantly answering with some good results the curiosity and much else about our country from our American friends, I realised the author has a message—an indeed stirring one—to all of us for not only today and tomorrow but also far far into the future to come. If the India of Our Dreams, which we all cherish is to come about and soon, I suggest one and all of my countrymen heed the author's signal which is a master lesson culled from our recent history. In fact the self-same maxim of National Unity and Discipline and Integrity is being stressed time and again by Mrs Indira Gandhi our great Prime Minister.

The novel tells well the story of Tipu Sultan, the man, the warrior, the prince and the king. Based on extensive research, of various records, the novel qualifies as a good contribution to the military and political history of the eighteenth century. Tipu, often maligned as a cruel and ruthless ruler and said to have tortured prisoners of war, emerges here as a dauntless warrior and an enlightened prince. He felt that God is not confined to any one religion and that all faiths deserve equal respect. Endeavouring to improve the lot of his people, he seemed convinced that there is little lasting glory if the foundation of power is mingled with tears and blood of humanity.

The author shows Tipu, trained for theology, was forced to take part in wars. On his father's death, he wanted to renounce kingship but could not do so because of the compelling urge of nationalism. Influenced by the American Declaration of Independence and applauding the spirit behind the French Revolution, he believed in the Rights of Man and he was concerned about the Judgement of History. To him death, fighting against British, would symbolise a sacrifice and set an example for future generations of Indians.

Although Tipu the Tiger is the centre piece of the story, with much else in supporting role, the main theme of this novel is the Unity of India and National Integration. It is to recapture this crux in the

mind's eye of our generation that the story has come to be written. That India was weakened, not so much by an outside power but by the peril and sickness of disunity and treachery within our own guts, Tipu knew well but perhaps belatedly. By then he must have felt India was in danger of dying an unnatural death from assassination by the enemy within. In that sorry plight, Tipu had perhaps seen not only a repetition of the historical process but also a lesson for the future. In the words of the author, as expressed in the novel, Tipu himself said :

"Yes, India will emerge free and independent long after we have perished...But freedom is not fulfilment. The question that tears at my heart is : 'What will be the face of India then ? Will our countrymen learn something from the past or will they be blind to the warnings and tread the same old paths of disunity and destruction ? Will they preserve the soul of the country or will they let it rot with linguistic, communal and petty tribal rivalries ? Will they set up provinces or divisions with each casting a stone at the other or will they be guided towards the common goal of greatness through individual, collective and cooperative effort ?"

In sum, apart from rehabilitating Tipu Sultan in national memory, this novel reinforces the belief that the lesson of decadence and disunity of the past is as valid today as it was in Tipu's times. That really is the book's message, loud and clear, in these days of "coup d'etats" and of "destabilizations" and what have you. The style is racy, moving at a fast pace, which makes it good reading. Vividly it brings to life, some of the battles of the eighteenth century. I would particularly recommend it to students of military history and strategy as soon as maps and sketches, together with the then orders of battle, appear in the coming editions. I also feel, costs permitting, some pictures of those days which exist should be included. Further, although his research has been extensive, the author could have easily referred also to the various Regimental Histories of many of the past and present British and Indian Regiments which fought at the Battle of Seringapattam in 1799. Such a step may add a few more pages to the book but bring out fascinating versions via the old war diaries and combat despatches of regimental officers and their leaders.

Finally I am indeed glad the author's mind and pen has lured a fine Hero to emerge thus retaining 'the fire' and not 'the ashes' of the past. If the substance of the story motivates, inspires and remotivates the coming Generations of India, then Tipu the Tiger having courted death, instead of saving himself, would not be in vain.

J.T.S.

CORRESPONDENCE

*Correspondence is invited on subjects which have been
dealt with in the Journal or which are
of general interest in the Services*

To
THE EDITOR
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I

DIGNITY OF EVERY HUMAN BEING

Sir,

ALLOW me to make a few observations or raise some questions on Brig Sodhi's article—"JUNIOR LEADERS INFANTRY" (April-June, 1973). Though I disagree with his approach and many points, the Brigadier deserves a good pat for making an attempt. What is appreciable is, at least, he is thinking of leaders in our army. The article is more on 'thinking level' than on 'feeling level'. As it appears to me it comes more from his 'head' than from his 'heart'. There are no 'gut level' feelings expressed in this article. Possibly he being in service, may be afraid of the man above him. When there is fear, you cannot have truth, nakedness and openness. But why? It is the sacred business of a writer to be balanced, at times ruthless to drive home a point, to be objective and give 'straight from the shoulder' without any fear. Leadership is a serious matter in any army and Junior leaders are very important. "Little things count in life".

Let us consider his conclusion. I think and feel where he has gone wrong is his conclusion. Examine these words critically:

"The most remembered are not the types who let the men have an easy time, but those who gave them a pride of positive achievement, like a tough exercise or march."

No! No! Brigadier, that is not right. The most remembered are those officers or leaders who gave their men a sense of human dignity and treated them as equal persons, sovereign in the realm of God, free and responsible. All men are equal.

Certainly it is not in a field exercise or arduous march of 40 miles with full pack. It is a spiritual and mental achievement of man. It concerns with the human dignity of man. What did Guru Gobind Singh do at Anandpur Sahib? He made five ordinary common men, extra-ordinary

and significant. He elevated them and gave them new dignity. He called them 'the Five Beloved'. Cunningham expresses the dynamic action of the Tenth Guru, "He effectually roused the dormant energies of the vanquished people and filled them with a lofty, although a fitful longing for social freedom and natural ascendancy." He did not take them out on a march. He raised them in front of thousands. He uplifted them. He made the 'no body', 'somebody' of importance.

Remember the words of Emma Goldman (My Further Disillusion, 1924) :

"The ultimate end of all revolutionary social change is to establish the sanctity of life, the *dignity of man*, the right of every human being to liberty and well-being."

What I have always felt is that in our army we like our men, we love our men ; but we don't honour our men. We fail to give them a natural sense of dignity (Izzat) to our JCOs and men. We don't consider them as our equal as illustrated in the principles of all great religions. When you call a man to cut grass in your private compound, surely you don't honour him as a human being, sovereign in nature. Why don't you cut your own grass ? I was amazed to see a German colonel's wife polishing the boots of her husband when I was his guest in 1971, at Hanover. He was a regiment commander and couldn't call a man to his house to polish his shoes. He must look after himself. All this batmanship is based on theology of inequality laid in Greek philosophy and in the caste system of India — higher and lower classes. This is not correct. We must banish this false sense of superiority from our minds. That is true freedom of man.

The philosophy of the Carpenter of Nazareth is that only in the interchange of giving and receiving can full human dignity be achieved, only in human interaction can human self-realization and human wholeness be achieved. To attain the fullness of self-expression every man must have dignity. Muhammad gave expression to this idea when he said that all men must stand in one line in the house of God to worship. There are special seats or places for kings or princes. The poor and the humble stand along with kings and generals. That is the dignity of man.

Mathew writes about an encounter between a centurian (Roman army captain) and Christ. The centurian has been commended for his faith as he tried to give dignity to his soldier who was 'lying paralyzed at home.' (Mathew 8 : 1-13). Read it. It is an interesting question on authority and how to use it. All the world great theologians and thinkers use it to illustrate the principles of rightful authority and dignity of man.

Atlantic School of Theology,
Halifax, Canada.
July 16, 1974

BARKAT MASIH KHOKHAR

II

REHABILITATION OF EX SERVICE MEN

Sir,

MUCH has been written in the U.S.I. Journal about the rehabilitation of released service men. As is well known the problem of rehabilitation is peculiar to the armed forces due to the retirement/release age of service men being much lower than their civilian counterparts. An article published in the Journal gave the number of service men released every year as 60,000 including 500 officers, of which 45,000 require resettlement.

A number of suggestions have been mooted in various articles. They include suggestions for pre/post release training, self-employment schemes, reservation of posts in central and state government departments, paramilitary forces and public and private sector undertakings, setting up of industrial and agricultural enterprises by regimental training centres, setting up of committees at cabinet, central government, state, division and district levels to keep watch on rehabilitation of ex-service men and the reorganisation of Directorate of Rehabilitation. While all these suggestions are feasible and correct in their own right, it will be apparent that they depend too much on the goodwill or consideration shown by various authorities and tackle the problem in a piecemeal and adhoc manner. By and large the authorities concerned adopt a patronising attitude when it comes to rehabilitating ex-service men and look upon it more as an encumbrance as they have their own pressing problems.

To solve the problem in its entirety we should evolve a system whereby a service man is automatically offered a job commensurate with his trade, qualifications and experience on release. Such a system will automatically preclude the need for pre/post release training or watch dog committees at various levels. Instead of approaching various ministries and public sector undertakings to reserve vacancies and tailor their recruitment and service rules to accommodate released service men, I feel the answer lies within the Ministry of Defence itself. A very large number of civilians are employed by the three services, the Ministry of Defence, the Ministry of Defence Production and the Ordnance Factories. Ex-service men with the right qualifications could be fitted in with little or no training. To give a few examples ; The MES, Ordnance Depots, Category A and B Establishments, R & D and Inspection Organisations and the three Service HQ employ a large number of civilians in various categories. All these jobs could be conveniently performed by ex-service men. We should therefore study the feasibility of such a scheme, and determine what percentage of the service men requiring rehabilitation can be absorbed in such manner.

There are however some important aspects to this proposal which must be understood. The scheme is workable only if first preference for all civilian jobs in the three services and aforementioned departments is always given to an ex-service man, and a civilian only employed if a suitable ex-service man is not available. In addition recruitment and service rules will have to be reframed to cover matters like inter se seniority, emoluments, promotions, etc. Under such a system an organisation will be needed to coordinate rehabilitation and feeding of personnel to various vacancies that arise. The Directorate General of Rehabilitation could possibly take on this job if suitably organised. Depending on their disability even some of the battle casualties and other disabled could be absorbed under this scheme.

It is obvious that to implement such a scheme a major policy decision at the highest level is needed and a gestation period of number of years will have to be endured before the scheme gets going in full swing.

College of Military Engineering
PUNE, 411031
28 Jun, 76

Major MU AHMED

III

Sir,

I have just received the April-July 1975 issue of the U.S.I. Journal—a year old !

Having served for 30 very happy years (1918-48) in the Indian Army it has been very interesting to read your excellent article "Rehabilitation of Defence Service Personnel".

Although I personally heartily agree with your arguments for the employment of defence services personnel after retirement at a comparatively young age—when they still have lots of life in them - I guess you will have an awful job to get the scheme past the Civil Service, some of whose personnel would be superseded ! But good luck to you if you can.

During demobilisation after the 1st World War I was for a time a Military Vice President of a District Soldiers' Board in the Madras Presidency. At that time of course we were dealing with resettlement of Other Ranks only. We did manage to get some of them employment in the police and private firms and a certain number of land grants. One snag at that time (I don't know whether it is still the same) was that a man who had earned a Pension and was re-employed in Govt. service had to accept a reduction in pay equal to the Pension. I always thought this to be unfair as the man had earned his Pension whatever else he might be willing to do.

Three of my friends, retired Officers of The Madras Regiment, are running businesses in which they employ ex-service personnel. One runs

a farm, another a tyre company and the other a fishing fleet. I hope to be seeing them all this September when I go out for my fourth re-visit to India since coming out on Pension in 1948. These return visits are always such a very great pleasure and the welcome and friendliness that one receives is quite beyond description. Another of my friends, also an ex-Officer of the Madras Regiment, has for long been on a Selection Board for Officers.

But apart from all this, as you, so rightly point out in your excellent article, the country is losing a lot of talent through non-employment of Officers and ORs following retirement.

I should be very interested to hear whether appreciable headway has been made, or is being made, in that direction ?

Lt Colonel GAI SANDERS

Gen. KP Candeth, PVSM (Retd.),
King George's Avenue,
New Delhi, 110011, INDIA.

IV

MUTINY ON THE BEAS

Sir,

I read with considerable interest 'Mutiny on the Beas' by Maj Gen SK Sinha, PVSM appeared in July-September 1975 issue of the Journal. According to the author there was fear in Greek soldiers to cross Indus, and demoralisation was the cause of the Mutiny.

I am not so sure if these could have been the main reasons for Alexander's withdrawal from the banks of Indus.

We should note that prior to withdrawing, for over ten years, Alexander and his troops were engaged in continuous warfare though they were invariably victorious. Very seldom victorious troops commit mutiny. My view is that Greek historians have over-emphasised some minor incidents to preserve the myth of Alexander's invincibility, and the withdrawal was a deliberate decision in the context of the military situation prevailed at the time. Alexander realised that he would have to march for many more years and face increasing opposition as he advanced eastwards.

Probably the dominant factor for withdrawal was logistics, in its wider sense. Alexander was operating at about one year's distance from his home base. Communications across the mountain ranges of Hindu Kush, and later across River Indus are treacherous. The mountain country was not conducive to the use of cavalry and demanded many garrisons.

Alexander was noted for abrupt alterations in the directions of his thrusts. He had also a strong predilection to protect his southern flank down to the sea. If it was a precipitous withdrawal he would not have taken the circuitous route he took.

Logistics across the Hindu Kush is a laborious and time consuming task. Even though the Greek Army depended for most of its needs on local resources it could have obtained armour, spears, trained men and horses only from its main bases. After the Greeks, logistics was probably the main cause for the turning back of the Bactrian, Parthian and the Huns.

Perhaps, Alexander had not given up at this time for good, all thoughts of a future campaign. He used the occasion for clearing his southern flank and sending home some war weary soldiers. Clearing the southern flank was a deliberate operation, as unlike in the past, there was no Persian navy to cause him concern. We cannot be sure, but if he had lived long enough Alexander might not have returned to cross the Indus and proceed further east. Where else could he have fought another empire? If his war policy was to conquer all the known land would he have not returned with fresh troops. Any way, as if an insurance for this eventuality he had protected his direct lines of communications with a chain of bases, down to Beas. In fact, later his successor Selucus made use of these, though unsuccessfully.

I would not like to speculate as to what would have been the outcome, had the mobile Macedonian cavalry under Alexander came into contact with the Mauryan Army which did not have a strong mobile army, but had the advantage of Chanakya's worthy advice and Chandragupta's dynamic leadership.

Hindustan Latex Ltd,
KAWDIAR
TRIVANDRUM
25 August 76

Maj Gen TNR NAYAR, PVSM (Retd.)

V

QUO VADIS—INDEPENDENT ARMoured BRIGADE

Sir,

A-propos Lt Col JK Dutt's article "Quo Vadis, Independent Armoured Brigade?" in your Sep 75 issue, may I say the Colonel's effort has been "bold", in keeping, perhaps with his wishful expectation of tankmen's tradition and then because your August Journal has permitted such opinion to see the light of the day? Though we seem to have come some way from the Colonel's rather frustrated experience of the '71 War, at least in teaching and re-learning the theoretical portion, there is no doubt that most of the readers will agree with the author to a

very large degree on the discernible gap between our knowledge of tank warfare and its execution in the spirit envisaged by its founding fathers. Our knowledge of armoured warfare is as good as that of the best in the world, since it is a question of reading books. Our planning too can be said to be of very high standards. But, unfortunately, and invariably, we seem to flounder on the rock of execution.

Admittedly there is a greater tendency to apportion whatever the Comdr (particularly at higher level) has by way of tank forces to subordinate formations, but the Colonel, perhaps in an attempt to highlight the tendency, has been somewhat less generous to the professional competence of all rungs of leadership, when he describes his later "bloomers" where squadrons are grouped with battalions, troops with companies and so on. Somehow it does not seem to be that bad. How radical would it be if, instead of apportioning elements of armoured brigade to infantry formations, we experimented the other way round, i.e., grouping an infantry brigade group (even if less a battalion) with the armoured brigade and making it a sort of a composite division? If the potential is accepted then the subsequent humdrums like who should command this force, how it should be administered and so on can be solved with less difficulty. Staff officers will say where is the transport for this infantry brigade to make it mobile? It is a problem, but it can be surmounted by grounding certain formations for certain periods. After all every formation is not attacking or being attacked at the same time. We can hire transport to get the grounded formations going again. It is true, sufficient tracked vehicles cannot be given to the infantry brigade to give it cross country mobility as that of the tanks, but such weaknesses have to be accepted and made best use of to the maximum extent. The German infantry in the initial stages of the Second World War marched 30-40 miles each day, behind their Panzer formations. Our tasks are unlikely to be that hard and exacting, in view of the short limited wars we are restrained by various constraints.

It is obvious that the infantry must have the ability to face tank threat to a reasonable degree. Anti tank defence is provided by tanks themselves, mines, anti tank guns, missiles, air cover and infantry anti tank weapons. It is all right in the present ambience where so many alternative weapons against tanks are available due to technological advances, to take away divisional armoured regiments and group them into independent armoured brigades, but what one normally misses is the point that either sufficient alternative anti tank weapons are not provided to such divisions or the attitude of the infantry (and to an extent, the other arms too) has not been attuned towards a feeling of confidence in "self-reliance". It is not merely material provision but also mental preparation which will really enable the infantry to release tanks for other

tasks of an armoured brigade. A very pertinent lesson the infantrymen must devour is the self reliance against the Israeli tank threat exhibited so markedly by the Egyptians in the '73 Arab-Israeli War. Yet another instance of such make-up is to be found in the deadly use of the 88 MM gun by the Germans in the Second World War. Until this attitude is built up and provisioning of alternative weapons made tanks will continue to be apportioned to battalions, companies and platoons.

There is no denying the fact that tank is the most versatile anti tank weapon today in the list available to us. No other weapon system combines protection, speed, hitting power and flexibility barring perhaps an armoured chopper, not available to us. Then there is no denying the fact that a formation or unit given a defensive task, be it at any stage or under any circumstance, has the unambiguous responsibility of "defending every bit of space of its responsibility" and denying that space to the enemy, particularly in our context of short wars and emphasis on territory. For that body of troops the speediest and the most effective way of ensuring this is to have tanks ready and available with minimum loss of time, a factor leading to its dispersion and apportionment. Just because some tank units in the '71 war were not used in some areas is not a sufficient reason to say that the infantry formations do not always need them. To my mind there should be a judicious mixture of tanks and other anti tank weapons in infantry formations in a defensive or a holding role.

Boldness—its lack—has perhaps been the bane of our army. In this instance there are a few possible reasons. Firstly, the paucity, "cost-effectiveness", "paper-tigerness" of tanks. If the squadron loses a couple of tanks it comes to a halt. Secondly, the administrative and supporting echelons in our army are still wheeled and road-bound to a very large extent. Thirdly, the nature of terrain in the areas of likely conflict and the limited engineering resources available to create goings for tanks impose considerable caution. Fourthly, the tremendous stakes involved in such short duration wars, where there is little or no opportunity to rectify even a single mistake or a miscalculation. This obviously weighs heavily on the higher commanders. In fact the more you think of the employment of tanks in our context the more does it occur to you that gradually tank formations are becoming increasingly instruments of deterrent only. In our situation it is perhaps futile to expect the boldness of a Guderian or the dash of a Rommel. But all this is not to hold any brief for our commanders in their failure or inability to be bold enough. One can only hope some commanders hold some trade secrets of being bold, not so much by wishful thinking as by willful self-education and professional spirit, despite the fact that none of our schools (colleges) of instruction attempts to instill or teach boldness.

The colonel has made a very peculiar suggestion of having an

armoured corps officer of the rank of brigadier to advise the Corps HQ on the employment of armour. Employment of armour is part of the process of "application of force", which is what all higher commanders are supposed to have exposed themselves to, applied to and learnt to a degree that brings them the ranks of brigadier and above. Neither were O'Connor, Horrocks, Rommel, Manstein and Montgomery tankmen nor did they have armoured corps advisors. If the corps has an armoured brigade, its commander will be told what he is supposed to do and the commander can discuss with the corps commander the optimum utilisation of the armoured force. What this new armour advisor's job is either ambiguous or superfluous, unless the idea is to promote career prospects of tank officers. On the other hand there is an inescapable need to have more and more officers of infantry, artillery and engineers doing tank courses at troop, squadron and regimental levels in the Armoured Corps Schools.

While there is no dispute about the classical employment of armour—concentrated, full-blooded, opportune and bold—, our own parameters and constraints perhaps do necessitate modifications, albeit much to the chagrin of the tank purist. However, one thing is abundantly clear : that we can and ought to be bold in the use of the armoured brigade even from within our conditions and constraints. And it is a matter of material provisioning, mental preparation, innovative approach and professional education (as against mere instruction).

C/o 56 APO
31 Aug 1976

Lt Col SC SARDESHPANDE

VI

SYSTEM OF PROMOTION TO HIGHER RANKS IN THE ARMY

Sir,

MAY I suggest a few modifications to the article written by Brig OS Bhandari.

- (a) At the time of opting the Gentlemen Cadets are not in the full knowledge of the implications of their option besides due to immaturity and minor considerations like the Arm/Service of their platoon/company/battalion commanders are likely to sway their choice of Arm/Service.
- (b) The suggestion that all officers screened and found fit for selection in the General Cadre be transferred to the Infantry be modified. Officers selected for the General Cadre need a wider mix and wider horizons which can be best achieved by attaching the officer to both the fighting arms namely Infantry and Armoured Corps for a minimum period of one year each and thence to the

other two supporting arms the Artillery and the Engineers. This will enable the officers to gain a thorough and intimate knowledge of all the Arms including the "Nuts and Bolts" of their tactics and employment. This system is being followed by the US Army and their officers who attend our Staff College are found to be highly knowledgeable and practical. Besides such forcible conversion to Infantry are likely to smother the ever/so carefully nurtured regimental traditions specially those of the Armoured Corps.

It is further suggested that the classification of the Corps of Signals as an Arm be reviewed. No personnel of the Corps of Signals are intimately concerned in the all operations of war for even the Infantrymen relies on his signals platoon for line and radio communication within his unit. If the signals can be considered as an Arm so can Medical Services and the EME who also form an integral part of any of the fighting or supporting arm units. In the US Army the Corps of Signals is a Services unit and women signallers have efficiently maintained the rear signal links of the Israel Army.

EME School
BARODA—390008
7 Oct 1976

Major PM RAVINDRAN

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SECRETARY'S NOTES

MEMBERS ADDRESSES

Copies of the Journal posted to members are sometimes returned undelivered by the Post Office with remarks such as 'the addressee has been transferred', etc. This appears to be on the increase and the only way to rectify it is for the members to drop a line to the Secretary whenever their addresses change due to promotion, transfer, etc. It is of the utmost importance that the Institution should have the up-to-date addresses of all its members.

ANNUAL SUBSCRIPTION

Although the Institute's year 1976 is now ten month old, I regret to say that there are still many members who have not yet paid their subscription which was due on the 1st January last. Could I therefore request all members who have not yet paid their subscription for the current year, to let me have their remittance by return of post.

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From 1st July to 30th September, 1976 the following members joined the Institution :—

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Barnett, A. Doak	China After Mao. 1967
Chesneaux, Jean	Secret Societies in China. 1971
Chi, Madeleine	China Diplomacy, 1914-1918. 1970
Chun-TU HSUEH ed.	Revolutionary Leaders of Modern China. 1971
Drake, Fred W.	China Charts the World: HSU CHI YU & His Geography of 1848. 1975
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Osborne, Milton	River Road to China. 1975
Skyke, Lymon P. Van	The Chinese Communist Movement 1968
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Wilkinson, Endymion	The History of Imperial China. 1973
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1976

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8. The award of the judges appointed by the Council of the Institution is final.
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